

DEPARTMENT OF AGRICULTURE**Food and Nutrition Service****7 CFR Parts 210, 215, 220, and 226**

[FNS–2020–0038]

RIN 0584–AE81

Child Nutrition Programs: Transitional Standards for Milk, Whole Grains, and Sodium**AGENCY:** Food and Nutrition Service (FNS), USDA.**ACTION:** Final rule with request for comments.

SUMMARY: USDA is finalizing its November 25, 2020, proposed rulemaking regarding child nutrition meal pattern requirements. This final rule will establish transitional standards to support the continued provision of nutritious school meals as schools respond to and recover from the pandemic and while USDA engages in notice-and-comment rulemaking to update the meal pattern standards to more comprehensively reflect the *Dietary Guidelines for Americans, 2020–2025*. This final rule will provide immediate relief to schools during the return to traditional school meal service following extended use of COVID–19 meal pattern flexibilities. This rule finalizes the proposed milk provision by allowing local operators of the National School Lunch Program and School Breakfast Program to offer flavored, low-fat milk (1 percent fat) for students in grades K through 12 and for sale as a competitive beverage. It will also allow flavored, low-fat milk in the Special Milk Program for Children and in the Child and Adult Care Food Program for participants ages 6 and older. Beginning in SY 2022–2023, this final rule will require at least 80 percent of the weekly grains in the school lunch and breakfast menus to be whole grain-rich. Lastly, this final rule will modify the proposed sodium standards and establish Sodium Target 1 as the sodium limit for school lunch and breakfast in SY 2022–2023 as proposed, but implement a Sodium Interim Target 1A effective for school lunch beginning in SY 2023–2024.

DATES:

Effective date: This final rule will become effective July 1, 2022.

Comment date: Written comments on this final rule should be received on or before March 24, 2022, to receive consideration.

ADDRESSES: The Food and Nutrition Service, USDA, invites interested persons to submit written comments on the provisions of this final rule.

Interested persons are also invited to comment on considerations for future rulemaking related to the school nutrition requirements. In the coming months, the public will have an additional opportunity to comment when the Food and Nutrition Service publishes a new proposed rule related to the school meal pattern requirements. Comments related to this final rule may be submitted in writing by one of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the online instructions for submitting comments.
- *Mail:* Send comments to Tina Namian, Chief, School Programs Branch, Policy and Program Development Division—4th Floor, Food and Nutrition Service, 1320 Braddock Place, Alexandria, VA 22314; telephone: 703–305–2590.

All written comments submitted in response to this final rule will be included in the record and will be made available to the public. Please be advised that the substance of the comments and the identity of the individuals or entities submitting the comments will be subject to public disclosure. The Food and Nutrition Service will make the written comments publicly available on the internet via <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Tina Namian, Chief, School Programs Branch, Policy and Program Development Division—4th Floor, Food and Nutrition Service, 1320 Braddock Place, Alexandria, VA 22314; telephone: 703–305–2590.

SUPPLEMENTARY INFORMATION:**Table of Abbreviations**

APA—Administrative Procedure Act
CACFP—Child and Adult Care Food Program
FDA—U.S. Food and Drug Administration
FFCRA—Families First Coronavirus Response Act
FNS—Food and Nutrition Service
HEI—Healthy Eating Index
ICN—Institute of Child Nutrition
NSLP—National School Lunch Program
SBP—School Breakfast Program
SFA—School Food Authority
SFSP—Summer Food Service Program
SMP—Special Milk Program
SY—School Year
USDA—United States Department of Agriculture

I. Background

This final rule establishes transitional standards for the Child Nutrition Program requirements related to milk, whole grains, and sodium to support schools after more than two years of serving meals under pandemic conditions. This final rule will apply as

the U.S. Department of Agriculture (USDA) works to strengthen the school meal pattern requirements through another notice-and-comment rulemaking based on a comprehensive review of the *Dietary Guidelines for Americans, 2020–2025* (*Dietary Guidelines*). As described further below, USDA plans to promulgate a new rule for long-term meal pattern requirements to be effective starting in school year (SY) 2024–2025. The standards in this final rule are intended to be transitional and in effect for only two school years (SY 2022–2023 and SY 2023–2024). In case of a delay, the standards in this rule will remain effective until subsequent standards are promulgated. Nevertheless, because USDA intends to establish new meal pattern requirements for SY 2024–2025 and beyond, the standards in this rule will be referred to as “transitional.”

This rule finalizes the proposed rule *Restoration of Milk, Whole Grains, and Sodium Flexibilities* (85 FR 75241, November 25, 2020) with some modifications based on review of the comments received, circumstances caused by the COVID–19 pandemic, and current dietary science. Although the proposed rule would have implemented permanent changes to the school meal standards, USDA agrees with public comments that making permanent changes in response to circumstances created by COVID–19 is not a viable long-term solution. However, public comments also asserted that due to the financial and operational impacts of the pandemic, it would be unrealistic for USDA to expect schools to fully meet certain meal standard requirements in the immediate term, and supported allowing more time for product innovation and implementation. As noted, following publication of this final rule, USDA intends to propose a new rulemaking to continue to support successful, science-based meal pattern requirements based on a comprehensive review of the *Dietary Guidelines for Americans, 2020–2025* and meaningful stakeholder input. USDA will develop updated standards through the new rulemaking for implementation in SY 2024–2025 and beyond, based on current nutrition science and public input on how to build on the success of school meals in supporting healthy eating and improved dietary outcomes.

In 2012, the USDA updated the National School Lunch Program (NSLP) and School Breakfast Program (SBP) meal requirements, as required by the National School Lunch Act in Section 4(b)(3)(A), 42 U.S.C. 1753(b)(3)(A). These new meal requirements were a key component of the Healthy, Hunger-

Free Kids Act, (Pub. L. 111–296), and raised school meal nutrition standards for the first time in more than 15 years. The updated requirements were largely based on recommendations issued by the National Academy of Medicine (formerly the Institute of Medicine), which, in turn, were based on the 2005 *Dietary Guidelines*. The implementing regulations¹ increased the availability of fruits, vegetables, whole grains, and fat-free and low-fat milk in school meals; limited sodium and saturated fat

and eliminated *trans* fat in the weekly school menu; and established calorie ranges intended to meet part of the age-appropriate calorie needs of children.

Regarding the milk, grains, and sodium requirements, the regulations implemented in 2012:

- Allowed flavoring only in fat-free milk in the NSLP and SBP;
- Required that at least half of the grains offered in the NSLP be whole grain-rich (meaning the grain product contains at least 50 percent whole grains

and the remaining grain content of the product must be enriched) in SY 2012–2013 and one year later in the SBP; and required that effective SY 2014–2015, all grains offered in both programs be whole grain-rich; and

- Required schools participating in the NSLP and SBP to reduce the sodium content of meals offered on average over the school week by meeting progressively lower sodium targets over a 10-year period (Target 1, Target 2, and the Final Target).²

Age/grade group	Target 1 (mg) July 1, 2014 (SY 2014–2015)	Target 2 (mg) July 1, 2017 (SY 2017–2018)	Final Target (mg) July 1, 2022 (SY 2022–2023)
K–5	<1,230	<935	<640
6–8	<1,360	<1,035	<710
9–12	<1,420	<1,080	<740

Before and after the regulations were implemented in 2012, USDA offered guidance, technical assistance resources, and tailored trainings for schools in collaboration with the Institute of Child Nutrition (ICN) (formerly the National Food Service Management Institute). Program advocates, the food industry, and other stakeholders also collaborated with USDA in different ways to assist schools with implementation. This enabled many schools to adopt most of the changes to the NSLP and SBP meal patterns. USDA acknowledges the significant efforts and progress these schools have achieved, and is committed to further meal pattern improvements to address children's nutritional needs.

Many components of the 2012 regulations were successfully implemented, and had measurable, positive impacts, as demonstrated by the Healthy Eating Index (HEI) scores associated with school meals and recent research showing that U.S. children get

their healthiest meals of the day at school.³ The HEI is a measure of diet quality used to assess how well a set of foods aligns with key recommendations of the *Dietary Guidelines*, with scores ranging from 0 to 100. An ideal overall HEI score of 100 reflects that the set of foods aligns with key dietary recommendations from the *Dietary Guidelines*.⁴ For example, the school lunch average total HEI score increased by 24 points (57.9 to 81.5) from SY 2009–2010 to SY 2014–2015. For school breakfast, the average total HEI score increased by 21 points (49.6 to 71.3) over the same time period.⁵ Many schools had great success in implementing the updated nutrition standards in a way that encourages healthy eating and participation.

However, full implementation of the 2012 meal pattern requirements for milk, whole grains, and sodium has been delayed due to legislative and administrative actions. Through multiple annual appropriations bills,⁶ Congress directed USDA to provide

flexibilities for these specific requirements. Mainly in response to this congressional direction, USDA issued several policy memoranda addressing the affected nutritional requirements for each specified time period.⁷ For example, as required by the Consolidated Appropriations Act, 2017 (Pub. L. 115–31), USDA issued policy guidance providing milk, whole grains, and sodium flexibilities for SY 2017–2018.⁸ This guidance allowed State agencies to grant exemptions to allow flavored, low-fat milk in the NSLP and SBP and as a competitive food if schools demonstrated hardship by documenting a reduction in student milk consumption or an increase in school milk waste. For whole grains, the guidance allowed State agencies to offer exemptions to the whole grain-rich requirements if SFAs could demonstrate hardship in procuring, preparing, or serving compliant products that were accepted by students. Finally, for sodium, the guidance allowed schools

¹ *Nutrition Standards in the National School Lunch and School Breakfast Programs* (77 FR 4088, January 26, 2012). Available at: <https://www.federalregister.gov/documents/2012/01/26/2012-1010/nutrition-standards-in-the-national-school-lunch-and-school-breakfast-programs>.

² Sodium reduction timeline and amounts in the National School Lunch Program, from final rule *Nutrition Standards in the National School Lunch and School Breakfast Programs* (77 FR 4088, January 26, 2012).

³ Liu J, Micha R, Li Y, Mozaffarian D. *Trends in Food Sources and Diet Quality Among US Children and Adults, 2003–2018*. JAMA. April 12, 2021. Available at: https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2778453?utm_source=For_The_Media&utm_medium=referral&utm_campaign=ftm_links&utm_term=040921.

⁴ For more information about the Healthy Eating Index, see *How the HEI Is Scored*: <https://www.fns.usda.gov/how-hei-scored>.

⁵ *School Nutrition and Meal Cost Study* findings suggest that the updated nutrition standards have had a positive and significant influence on the nutritional quality of school meals. Between SY 2009–2010 and SY 2014–2015, “Healthy Eating Index–2010” (HEI) scores for NSLP and SBP increased significantly, suggesting that the updated standards significantly improved the nutritional quality of school meals. Over this period, the mean HEI score for NSLP lunches increased from 57.9 to 81.5, and the mean HEI score for SBP breakfasts increased from 49.6 to 71.3. The study is available at: <https://www.fns.usda.gov/school-nutrition-and-meal-cost-study>. (OMB Control Number 0584–0596, expiration date 07/31/2017.)

⁶ These include Section 743 of the Consolidated and Further Continuing Appropriations Act, 2012 (Pub. L. 112–55); Sections 751 and 752 of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113–235); Section 733 of the Consolidated Appropriations Act, 2016 (Pub. L. 114–113); Section 747 of the

Consolidated Appropriations Act, 2017 (Pub. L. 115–31) (Consolidated Appropriations Act, 2017). For a more detailed discussion, please see the interim final rule *Child Nutrition Programs: Flexibilities for Milk, Whole Grains, and Sodium Requirements* (82 FR 56703, at 56704, November 30, 2017). Available at: <https://www.federalregister.gov/documents/2017/11/30/2017-25799/child-nutrition-programs-flexibilities-for-milk-whole-grains-and-sodium-requirements>.

⁷ These include SP 20–2015, *Requests for Exemption from the School Meals’ Whole Grain-Rich Requirement for School Years 2014–2015 and 2015–2016*; SP 33–2016, *Extension Notice: Requests for Exemption from the School Meals’ Whole Grain-Rich Requirement for School Year 2016–2017*; and SP 32–2017, *School Meal Flexibilities for School Year 2017–2018*.

⁸ SP 32–2017, May 22, 2017, *School Meal Flexibilities for School Year 2017–2018*.

to continue to meet Sodium Target 1 in SY 2017–2018.

USDA's policy guidance for SY 2017–2018 was followed by the interim final rule *Child Nutrition Programs: Flexibilities for Milk, Whole Grains, and Sodium Requirements* (82 FR 56703, November 30, 2017), which established regulations that extended school meal flexibilities through SY 2018–2019 and applied the flavored milk flexibility to the Special Milk Program for Children (SMP) and the Child and Adult Care Food Program (CACFP) for participants age 6 and older in SY 2018–2019 only. As a result, the regulations applicable in SY 2018–2019 provided flexibility in three specific areas while retaining other essential meal requirements from the 2012 rule (for example, fruit and vegetable quantities, saturated and *trans* fat limits, and calorie ranges) that contribute to healthy meals. In brief, for SY 2018–2019, the interim final rule:

- Provided NSLP and SBP operators the option to offer flavored, low-fat (1 percent fat) milk with reimbursable meals in grades K through 12 and as a beverage for sale during the school day, and applied the flexibility in the SMP and CACFP for participants age 6 and older;
- Allowed State agencies to continue granting school food authority (SFA) exemption requests to use specific alternative grain products if the SFA could demonstrate hardship(s) in procuring, preparing, or serving specific products that were acceptable to students and compliant with the whole grain-rich requirement; and
- Retained Sodium Target 1 in the NSLP and SBP.

USDA issued a final rule in December 2018 (83 FR 63775, December 12, 2018). In general, the 2018 final rule, which became effective on July 1, 2019, generally codified the flexibilities offered in the 2017 interim final rule but made some key modifications. The optional flexibilities codified in the 2018 final rule included the following targeted changes with the balance of the meal pattern remaining intact:

- Allowing schools in the NSLP and SBP to offer flavored, low-fat milk at lunch and breakfast for grades K through 12 and as a beverage for sale à la carte, and requiring that unflavored milk (fat-free or low-fat) be available at each school meal service, as well as allowing flavored, low-fat milk in the SMP and CACFP for participants ages 6 and older, for consistency across the Child Nutrition Programs;
- Requiring that at least half of the weekly grains in the NSLP and SBP be whole grain-rich and that the remaining weekly grains offered be enriched; and

- Retaining Sodium Target 1 through SY 2023–2024, moving Target 2 to SY 2024–2025, and eliminating the Final Target.

On April 3, 2019, the Center for Science in the Public Interest challenged the 2018 final rule claiming the regulation was unlawful under the Administrative Procedure Act (APA). On April 13, 2020, the District of Maryland, in *Center for Science in the Public Interest v. Perdue*, 438 F. Supp. 3d 546 (D. Md. 2020), vacated the rule. The court found that while the standards finalized by that rule were reasonable interpretations of relevant statutory language that gave discretion to USDA to promulgate standards “based on” the *Dietary Guidelines* but not necessarily matching the *Dietary Guidelines*, 438 F. Supp. 3d at 562–64, the 2018 final rule was not a logical outgrowth of the 2017 interim final rule, and therefore violated the APA.

When the 2018 final rule was vacated, the meal pattern requirements immediately reverted to the 2012 regulations. USDA published a notice in the **Federal Register** that removed the regulatory text that was changed by the 2018 final rule and replaced it with the regulatory text from the 2012 final rule (85 FR 74847, November 24, 2020). In addition, on November 25, 2020, USDA issued a new proposed rule that would have codified the operational flexibilities included in the 2018 final rule (85 FR 75241, November 25, 2020).

The vacatur of the 2018 rule coincided with the COVID–19 pandemic. Beginning in March 2020, using authority provided by the Families First Coronavirus Response Act (FFCRA) (Pub. L. 116–127), which was not at issue in the court ruling, USDA published a series of nationwide waivers to provide flexibility to a variety of program requirements so that children continued to have access to nutritious meals during the pandemic.⁹ Along with several other waivers, meal pattern waivers provided by USDA facilitated the service of grab-and-go meals, which helped schools provide a safe and socially distanced meal service for the remainder of SY 2019–2020. For example, under the standard NSLP and SBP requirements, meals must meet age/grade group requirements and children must have a choice (at least two different options) for fluid milk. The waivers gave schools flexibility for these and other requirements that were more difficult to meet when serving pre-

packaged meals, bulk meals, or to-go meals that parents or guardians took home to their children. During SY 2020–2021, using FFCRA authority,¹⁰ USDA provided waivers to allow schools to operate the Summer Food Service Program (SFSP), which operates under separate, simpler meal pattern requirements, and which was not affected by the court ruling. For SY 2021–2022, USDA focused on supporting the safe reopening of schools and moving toward meals that meet the NSLP and SBP standards. To this end, USDA issued a nationwide waiver based on the FFCRA authority allowing schools to operate the NSLP Seamless Summer Option, which follows the NSLP and SBP meal patterns, during the regular school year. Under another nationwide waiver, schools that were unable to meet the NSLP and SBP standards due to the pandemic could request targeted meal pattern waivers from their State agency, including those providing flexibility for the milk, whole grains, and sodium requirements.¹¹ Therefore, the new, independent statutory authority that Congress provided in response to COVID–19 authorized significant but temporary flexibilities from the 2012 standards for milk, whole grains, and sodium. USDA recognizes that schools may not be prepared to immediately implement the 2012 meal standards for milk, whole grains, and sodium when the current COVID–19 meal pattern waiver expires on June 30, 2022. With this rule, USDA intends to provide a transitional approach in these areas while also acknowledging that a return to stronger nutrition standards is imperative to support healthy eating and improved dietary outcomes.

Establishing Strong School Meal Nutrition Standards

Throughout the pandemic, the critical role of the school meal programs has become increasingly clear. Food hardship increased in spring 2020 and has remained high during the public health emergency. In March 2021, households with children were more likely to report that their household did not get enough to eat (11 percent, compared to 7 percent of households without children). Black and Latino households also experienced disproportionate rates of food hardship; in March 2021, 16 percent of Black and

¹⁰ On October 1, 2020, the FFCRA was extended by the Continuing Appropriations Act 2021 and Other Extensions Act (Pub. L. 116–159).

¹¹ See *Nationwide Waiver to Allow Specific School Meal Pattern Flexibility for School Year 2021–2022*: <https://www.fns.usda.gov/cn/child-nutrition-response-90>.

⁹ USDA's COVID–19 nationwide waivers are available at: <https://www.fns.usda.gov/fns-disaster-assistance/fns-responses-covid-19/child-nutrition-covid-19-waivers>.

Latino households reported that their household did not get enough to eat compared to 6 percent of White households.¹² Federal nutrition programs, including the school meal programs, have played a critical role in supporting individuals, families, and children facing food and nutrition insecurity during this challenging time. In response to the COVID-19 pandemic, it was essential for USDA to provide schools with broad flexibility to support families in need. It is equally critical now to establish the pathway to return to strong school nutrition standards consistent with current dietary science.

School meals are one of the most powerful tools for ensuring children have access to healthy and nutritious food, and evidence shows that strong school nutrition standards are effective. After the 2012 rule went into effect, the HEI component scores for fruits jumped from 77 percent to 95 percent of the maximum score, and the scores for vegetables jumped from 75 percent to 82 percent. The updated standards also reduced empty calories, with the HEI component score for empty calories improving from 73 percent to 96 percent of the maximum possible score.¹³ USDA research on implementation of the 2012 standards also found that students who ate school lunches were more likely to consume milk, fruits, and vegetables at lunch, and less likely to consume desserts, snack items, and non-milk beverages at lunch, compared to students who ate lunches from home or other places.¹⁴ Another study found higher diet quality associated with the 2012 rule extended to low-income, low-middle-income, and middle-high-income students participating in the school lunch program.¹⁵ Recent research shows that U.S. children get their healthiest meals of the day at school,¹⁶ and for many children, the

meals they receive from school are a primary source of food, providing up to half their dietary intake every school day.¹⁷

Improving nutrition is a critical element in preventing childhood obesity, which puts children at risk for poor health,¹⁸ and in combatting the serious effects of diet-related disease. The pandemic has added urgency to the already critical issue of nutrition insecurity, as diet-related chronic diseases including diabetes, hypertension, and heart failure made people more vulnerable to COVID-19.¹⁹ Further, these conditions are costly; total spending to treat cardiovascular disease, cancer, and diabetes in the United States was \$383.6 billion in 2018, which was 18 percent higher than in 2009. According to the Government Accountability Office, government spending accounted for the majority (54 percent) of spending for treatment of cardiovascular diseases, cancer, and diabetes in 2018. Total government spending for diet-related health conditions increased 30 percent from 2009 through 2018.²⁰ Children facing nutrition insecurity are at a higher risk for diet-related chronic diseases. By contrast, healthy eating can reduce an individual's risk of developing high blood pressure, heart disease, type 2 diabetes, cancer, and other harmful conditions.²¹

Research also shows that chronic health conditions can be more common

or severe for some racial and ethnic groups. For example, from 2013 to 2016, total age-adjusted diabetes was higher among Hispanic (18 percent) and non-Hispanic Black (17 percent) adults compared to non-Hispanic White (10 percent) adults. Further, from 2017 to 2018, American Indian and Alaska Native adults had the highest age-adjusted prevalence rates of diagnosed diabetes by race/ethnicity.²² While many complex factors drive health disparities, increasing access to healthy foods is an important part of the solution. USDA research suggests that Black and Hispanic children participate in the school meal programs at higher rates than White children,²³ meaning that the school meal nutrition standards are an important tool in addressing health disparities and supporting racial equity. This makes it all the more important that USDA, in partnership with State agencies, schools, and other stakeholders, raises the bar on meal quality for children. School nutrition professionals have demonstrated their commitment to serving our children throughout the pandemic, and USDA applauds their efforts. As we collectively respond to and recover from COVID-19, it is important to provide children with the most nutritious food possible.

USDA is committed to working with its partners at all levels to achieve this shared goal. However, as acknowledged in the proposed rule, the menu planning challenges experienced by some schools, which have become significantly more difficult during the ongoing global pandemic and supply chain disruptions, necessitates a balance between nutrition science, practical application of requirements, and the need to ensure that children receive school meals they will eat. Accordingly, this final rule establishes transitional standards that apply only to the milk, whole grains, and sodium requirements.

¹² Center on Budget and Policy Priorities: *Number of Families Struggling to Afford Food Rose Steeply in Pandemic and Remains High, Especially Among Children and Households of Color*, April 27, 2021. Available at: <https://www.cbpp.org/sites/default/files/4-27-21fa2.pdf>.

¹³ See *School Meals Are More Nutritious After Updated Nutrition Standards*. Available at: https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS_infographic2_NutritionalQualityofSchool%20Meals.pdf.

¹⁴ See *Lunches Consumed From School Are the Most Nutritious*. Available at: https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS_infographic5_SchoolLunchesAretheMostNutritious.pdf.

¹⁵ Kinderknecht K, Harris C, Jones-Smith J. *Association of the Healthy, Hunger-Free Kids Act With Dietary Quality Among Children in the US National School Lunch Program*. JAMA. July 28, 2020. Available at: <https://jamanetwork.com/journals/jama/article-abstract/2768807>.

¹⁶ Liu J, Michalek R, Li Y, Mozaffarian D. *Trends in Food Sources and Diet Quality Among US Children*

and Adults, 2003–2018. JAMA. April 12, 2021. Available at: https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2778453?utm_source=For_The_Media&utm_medium=referral&utm_campaign=ftm_links&utm_term=040921.

¹⁷ Karen Weber Cullen, Tzu-An Chen, *The contribution of the USDA school breakfast and lunch program meals to student daily dietary intake*, Preventive Medicine Reports. March 2017. Available at: <https://www.sciencedirect.com/science/article/pii/S2211335516301516>.

¹⁸ According to the Centers for Disease Control and Prevention, in 2017–2018, the prevalence of obesity was 19.3 percent among children and adolescents, aged 2–19. Childhood obesity is also more common among certain populations. See Centers for Disease Control and Prevention: *Childhood Obesity Facts—Prevalence of Childhood Obesity in the United States*. Available at: <https://www.cdc.gov/obesity/data/childhood.html>.

¹⁹ *Coronavirus Disease 2019 Hospitalizations Attributable to Cardiometabolic Conditions in the United States: A Comparative Risk Assessment Analysis*. O'Hearn M, Liu J, Cudhea F, Micha R, Mozaffarian D. J Am Heart Assoc. February 2021. Available at: <https://www.nih.gov/news-events/nih-research-matters/most-covid-19-hospitalizations-due-four-conditions>.

²⁰ Government Accountability Office, *Chronic Health Conditions—Federal Strategy Needed to Coordinate Diet-Related Efforts*. August 17, 2021. Available at: <https://www.gao.gov/products/gao-21-593>.

²¹ Centers for Disease Control and Prevention, *Child Nutrition Facts*. Available at: <https://www.cdc.gov/healthyschools/nutrition/facts.htm>.

²² Centers for Disease Control and Prevention, *CDC's Racial and Ethnic Approaches to Community Health Program*. Available at: <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/reach.htm>.

²³ Overall, 70 percent of Hispanic and non-Hispanic Black students participated in the NSLP on the target day, compared with about half of non-Hispanic white students. See: U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, *School Nutrition and Meal Cost Study, Final Report Volume 4: Student Participation, Satisfaction, Plate Waste, and Dietary Intakes*, by Mary Kay Fox, Elizabeth Gearan, Charlotte Cabili, Dallas Dotter, Katherine Niland, Liana Washburn, Nora Paxton, Lauren Olsho, Lindsay LeClair, and Vinh Tran. Project Officer: John Endahl. Alexandria, VA: April 2019. Available at: https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS_Volume4.pdf. (OMB Control Number 0584–0596, expiration date 07/31/2017.)

Further, after considering public comments, in this final rule, USDA has modified the whole grains and sodium provisions to provide measured improvements in these areas during this transition period, as USDA develops longer-term standards that are achievable and aligned with the *Dietary Guidelines*. The other components of the 2012 regulations will remain in place.

As described in the next section, USDA will build on this final rule with a new rulemaking that comprehensively incorporates the updated *Dietary Guidelines* and nutrition science. The *Dietary Guidelines* provide science-based recommendations on what to eat and drink to promote health, reduce risk of chronic disease, and meet nutrient needs. The goals of the *Dietary Guidelines, 2020–2025* include a healthy dietary pattern that consists of nutrient-dense forms of foods and beverages across all food groups, in recommended amounts, and within calorie limits. They note the core elements that make up a healthy dietary pattern include vegetables and fruits of all types, grains, dairy, protein foods, and oils. The guidelines also recommend limiting foods and beverages that are higher in added sugars, saturated fat, and sodium. Stakeholders have emphasized the importance of aligning school meal nutrition standards with the *Dietary Guidelines*, as well as the importance of supporting schools in meeting stronger standards.²⁴ USDA is committed to its statutory obligation to develop school meal nutrition standards that are consistent with the goals of the latest *Dietary Guidelines*, and is committed to working toward this effort immediately following this rule.

Multi-Stage Approach to Nutrition Standards

USDA's long-term goal is to establish regulations that align school meal nutrition standards with the *Dietary Guidelines, 2020–2025* and support the successful provision of appealing and nutritious meals to millions of students each day. However, in response to the proposed rule, USDA received comments from a variety of stakeholders, including State agencies, advocacy and industry groups, and school nutrition professionals, noting the unprecedented disruptions that schools have faced over the last several years, particularly due to the COVID–19

pandemic. For example, public comments from two State agencies expressed support for a transitional approach to the sodium standards, noting that it would be challenging for schools to move directly to Target 2 immediately following the pandemic-related flexibilities. A school nutrition professional respondent agreed, arguing that requiring schools to comply with the 2012 standards following administrative flexibilities and COVID–19 operations is unreasonable; this respondent also hoped that future regulations could work towards continuing to improve the nutritional value of school meals. A respondent representing large school districts pointed out that due to COVID–19, school meal programs are in “operational and financial crisis,” and asserted that it is likely to take years for school meal programs to recover and achieve program sustainability. In light of these comments and experience administering the school meal programs during the pandemic, USDA recognizes that updating the standards to reflect the latest dietary recommendations will require thoughtfully addressing the challenges stakeholders face as a result of the public health emergency and the subsequent supply chain and meal service disruptions, as well as the impacts of the multiple delays in implementing specific elements of the milk, whole grains, and sodium standards prior to the pandemic.

Therefore, USDA is taking a two-stage approach to updating the school meal nutrition standards. This final rule, which will establish transitional standards for milk, whole grains, and sodium, is the first stage. This final rule is intended for two school years only: SY 2022–2023 and SY 2023–2024.²⁵ These transitional standards will balance the needs of schools as they recover from the challenges noted above, with measured steps towards improving nutritional quality.

This transitional approach will also allow industry additional time to reformulate and develop products needed to meet stronger standards, particularly products lower in sodium that students enjoy. As a food industry respondent noted, consumer acceptability, and specifically schoolchildren's acceptance, is critical to sodium reduction efforts. Other food industry respondents emphasized the need to maintain student acceptance when reformulating products, and

highlighted some specific challenges with maintaining palatability and food safety when reducing sodium. A June 2019 USDA study titled *Successful Approach to Reducing Sodium in School Meals*, which was referenced in the proposed rule and in public comments, identified several barriers to meeting Sodium Target 2 and the Final Sodium Target, including a low-level of demand for these products outside of the school system, the costs and time involved in reformulating existing products, limited capacity among schools to achieve the targets, and challenges with replacing sodium in some foods given its functionality.²⁶ More recently, a 2021 survey of school nutrition directors found that 62 percent of respondents considered product or ingredient availability to be a significant challenge in working towards meeting Sodium Target 2 limits, while another 33 percent considered product or ingredient availability to be a moderate challenge. Only 5 percent did not consider product or ingredient availability to be a challenge in meeting Sodium Target 2 limits.²⁷ These concerns were also raised in public comments, where some respondents noted how the pandemic has exacerbated issues with product availability. For example, respondents were unsure about industry's ability to meet demand for lower sodium products, due to supply chain and other challenges, and expressed concern about how product shortages and cost constraints could impact schools.

In the second stage, USDA intends to issue a proposed rule in fall 2022 which will address school meal nutrition standards for SY 2024–2025 and beyond. The new rulemaking will advance permanent standards that further demonstrate USDA's commitment to nutritious school meals. It will thoughtfully consider the areas addressed through this final rule and ensure that the long-term standards are consistent with the goals of the *Dietary Guidelines, 2020–2025* and nutrition science, as required by the National School Lunch Act. The new rulemaking will incorporate meaningful stakeholder input, and will meet the nutritional needs of America's schoolchildren. USDA intends for the new rule to be

²⁶ *Successful Approaches to Reduce Sodium in School Meals*. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/Approaches-ReduceSodium-Volume2.pdf>.

²⁷ School Nutrition Association. *Back to School 2021 Report: A Summary of Survey Results*. Available at: https://schoolnutrition.org/uploadedFiles/News_and_Publications/Press_Releases/Press_Releases/Back-to-School-Report-2021.pdf.

²⁴ USDA–FNS Listening Session with Nutrition Advocacy Groups, June 29, 2021. Available at: <https://www.regulations.gov/docket/FNS-2020-0038/document>.

²⁵ USDA fully expects to have new standards in place for SY 2024–2025 and beyond. However, in case of an unanticipated delay, the standards set by this rule will remain legally effective until subsequent standards are promulgated.

finalized in summer 2023, well in advance of procurement cycles for SY 2024–2025. USDA invites comments on the milk, whole grain, and sodium standards discussed in this final rule. USDA also welcomes comments on all other aspects of the meal pattern; these comments will help inform USDA's work to permanently update the school meal nutrition standards through the new rulemaking. USDA encourages the public to provide comments with the recommendations of the *Dietary Guidelines* in mind. As noted, the public will also submit comments on the proposed rule USDA intends to publish in fall 2022.

II. 2020 Proposed Rule Comment Summary

This final rule follows the proposed rule *Restoration of Milk, Whole Grains, and Sodium Flexibilities* (85 FR 75241, November 25, 2020). As noted, this final rule is an important step in USDA's longer-term effort to update the school nutrition requirements. With this final rule, USDA is making meaningful, achievable improvements in the nutritional quality of school meals for the short-term. Following this rule, USDA will engage in a longer-term effort to further strengthen the school meal pattern regulations, consistent with the goals of the *Dietary Guidelines* and nutrition science.

USDA appreciates public interest in the proposed rule. During the 30-day comment period (November 25, 2020–December 28, 2020), USDA received a total of 7,493 comments, including 3 non-germane or duplicate comments. Of the total, 7,041 comments were form letter copies from five form letter campaigns. USDA received 449 unique submissions, including 101 unique submissions that provided substantive comments on issues specific to the rule, including the milk, whole grain, and sodium standards.

Approximately 2,500 of the comments addressed the length of the comment period and requested an extension of the 30-day public comment period. The comment period was not extended; however, USDA carefully considered the comments received on the proposed

rule, the *Dietary Guidelines, 2020–2025*, and current challenges stemming from the pandemic. Further, as explained, this rule implements transitional standards; USDA will build upon this rule by issuing another notice-and-comment rulemaking to address standards for SY 2024–2025 and beyond.

Several respondents noted the impact of COVID–19 on the school meal programs. One respondent stated that the COVID–19 pandemic resulted in budget readjustments, food and supply shortages, and staffing emergencies for school meal programs. A State agency emphasized that schools may need additional time to transition back to providing meals that meet the 2012 standards, and noted that it seemed appropriate to temporarily extend the implementation of certain requirements, like sodium reductions, given the public health emergency. Several other respondents argued that USDA should not use the pandemic to make permanent changes to nutrition standards. Instead, they argued that USDA should issue temporary waivers, as needed, to respond to pandemic-related challenges.

In addition to specific comments about the milk, whole grains, and sodium standards, which are outlined within the section-by-section analysis of this preamble, respondents provided general feedback on the proposed rule. Proponents argued that the proposed rule would provide more menu planning options for schools, enhancing their ability to offer healthy and appealing meals. They stated the proposed changes would lead to increased meal consumption and better health outcomes for children. Proponents argued that the changes represent a permanent solution to operational challenges, rather than temporary rules and annual waivers. Some proponents stated that the proposed changes would provide a more readily available supply of food products. A professional association asserted that the changes would preserve important nutrition guidelines, including limits on calories and fat. Several proponents stated that the

proposed changes would not prevent school districts from having stricter nutrition guidelines, would not remove fruit and vegetable requirements, and still would encourage whole grains and lower sodium.

Opponents argued that the proposed changes are not needed because most schools are in compliance with the meal pattern requirements, and that the changes could restrain schools' progress in increasing whole grain consumption and reducing sodium intake. They argued that students eventually become accustomed to whole grain foods and foods with less sodium. Several opponents stated that the proposed changes are not in the best interest of children's health; citing the 2019 School Nutrition and Meal Cost Study, they suggested that nutritious school meals lead to improved health outcomes. Other opponents asserted that healthy school meals improve academic performance. Many opponents cited USDA research that found that the 2012 rule did not result in increased food waste. Some opponents stated that school meals should have high nutrition standards because they can be a source of more than 50 percent of a child's daily caloric intake. Multiple opponents suggested that the proposed rule would widen disparities in access to healthy meals for children of color, who are disproportionately impacted by food insecurity and diet-related chronic conditions, such as diabetes and hypertension. Several opponents argued that the 2012 meal pattern requirements promote child nutrition, are reasonable and supported by the science, and are effective at improving the nutritional quality of school meals. Many opponents stressed the importance of helping children develop positive dietary habits for life.

The following table shows tallies of the general comments received in support of and against the proposed changes. Tables outlining specific comments regarding the milk, whole grains, and sodium standards are included in the section-by-section analysis.

GENERAL FEEDBACK ON PROPOSED MILK, WHOLE GRAIN-RICH, AND SODIUM STANDARDS

Themes	Count of total comments received (including form letters)	Percent of all comments received (7,493)	Count of unique comments received	Percent of all unique comments received (449)
General Support				
Positive health impacts for children	36	0.5	36	8.0
Increase meal consumption and decrease food waste	128	1.7	124	27.6

GENERAL FEEDBACK ON PROPOSED MILK, WHOLE GRAIN-RICH, AND SODIUM STANDARDS—Continued

Themes	Count of total comments received (including form letters)	Percent of all comments received (7,493)	Count of unique comments received	Percent of all unique comments received (449)
Relieve industry of meal pattern compliance challenges (such as product development)	15	0.2	15	3.3
Reduce compliance burden for Program operators	42	0.6	42	9.1
Other general support	31	0.4	31	6.9
General Opposition				
Negative health impacts for children	2,553	34.1	85	18.9
Negative impacts on children's ability to access healthy meals	4,609	61.5	53	11.8
Changes are not needed (such as widespread compliance with existing standards)	21	0.3	21	4.7
Inconsistent with Dietary Guidelines	2,506	33.4	38	8.5
Other general opposition	16	0.2	16	3.6

USDA worked in collaboration with a data analysis company to code and analyze the public comments using a commercial web-based software product and obtained data showing support for or opposition to each proposed change. The Summary of Public Comments report is available under the Supporting Documentation tab in docket FNS–2020–0038. All comments are posted online at www.regulations.gov. See docket FNS–2020–0038, *Restoration of Milk, Whole Grains, and Sodium Flexibilities*.

III. Transitional Standards

USDA recognizes the importance of promoting strong nutrition standards, while also providing necessary support to schools as they respond to and recover from the public health and economic crisis. The challenges created by COVID–19 and supply chain constraints, raised by public comments, require a near-term response from USDA, which is achieved through this final rule. Although the proposed rule would have implemented permanent changes to the school meal standards, USDA agrees that making permanent changes in response to temporary circumstances created by COVID–19 is not a viable long-term solution. Following publication of this rule, USDA intends to work towards even stronger nutritional standards for reasons described further below, namely more positive health outcomes for children. Therefore, USDA will engage in another full notice-and-comment rulemaking in the near future which will consider, among other things, the current *Dietary Guidelines*. However, until such rulemaking is accomplished, schools need transitional standards that improve the nutritional content of

school meals in an achievable manner for the short-term.

USDA appreciates comments on the proposed rule that emphasized the importance of strong nutrition standards and the value of the 2012 requirements. USDA agrees that improving the school meal pattern standards is critical for ensuring nutrition security, which considers not only food access, but specifically, access to nutritious food that promotes health and wellbeing. As noted in the proposed rule, many schools have made significant progress towards achieving the 2012 standards; for example, the proposed rule noted that 70 percent of the weekly menus offered at least 80 percent of the grain items as whole grain-rich.²⁸ However, USDA also must consider comments emphasizing the widespread and ongoing impact of COVID–19 on schools.

The pandemic has impacted the entire Nation, and schools faced challenges adjusting to widespread closures, online and hybrid learning, and supply chain issues that affected the school meal service and the broader school environment. In public comments, respondents noted that the challenges

facing schools are ongoing, and some schools are not prepared to fully meet the milk, whole grains, and sodium requirements from the 2012 rule. While USDA does not have current comprehensive data on schools that would not be prepared to fully meet these three standards in the absence of this final rule, USDA does have data on schools that faced challenges with initial implementation of the milk, whole grains, and sodium standards after the 2012 rule took effect. According to a study conducted in SY 2014–2015, the most recent USDA data available, only 27 percent of NSLP menus were offering 100 percent of grains as whole grain-rich.²⁹ The same study found that about 72 percent of weekly lunch menus met the Sodium Target 1 requirement; however, this varied by type of school. For example, about 56 percent of weekly lunch menus in rural schools met Sodium Target 1, compared to 84 percent of urban schools.³⁰ Since then, there have been

²⁹ See: “All Grains are Whole Grain Rich: Percentage Meeting Requirement” in Table C.14 of *School Nutrition and Meal Cost Study, Final Report Volume 2: Nutritional Characteristics of School Meals* by Elizabeth Gearan, Mary Kay Fox, Katherine Niland, Dallas Dotter, Liana Washburn, Patricia Connor, Lauren Olsho, and Tara Wommak. Project Officer: John Endahl. Alexandria, VA: April 2019. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS-Volume2.pdf>. (OMB Control Number 0584–0596, expiration date 07/31/2017.) Note: In SY 2014–2015, all grains were supposed to be whole grain-rich. However, State agencies had the option of granting exemptions to this requirement if an SFA demonstrated hardship in procuring compliant whole grain-rich products that were acceptable to students.

³⁰ See: “Sodium: Percentage Meeting Requirement” in Tables C.14 and C.16 of *School Nutrition and Meal Cost Study, Final Report Volume 2: Nutritional Characteristics of School Meals* by Elizabeth Gearan, Mary Kay Fox, Katherine Niland, Dallas Dotter, Liana Washburn, Patricia Connor, Lauren Olsho, and Tara Wommak. Project Officer: John Endahl. Alexandria, VA: April

²⁸ See footnote 41 of *Restoration of Milk, Whole Grains, and Sodium Flexibilities*, November 25, 2020. Available at: <https://www.federalregister.gov/documents/2020/11/25/2020-25761/restoration-of-milk-whole-grains-and-sodium-flexibilities#footnote-41-p75252>. See also: “All Grains are Whole Grain Rich: Percentage Meeting Requirement and Percentage Below Requirement” in Tables C.14 and E.14 of *School Nutrition and Meal Cost Study, Final Report Volume 2: Nutritional Characteristics of School Meals* by Elizabeth Gearan, Mary Kay Fox, Katherine Niland, Dallas Dotter, Liana Washburn, Patricia Connor, Lauren Olsho, and Tara Wommak. Project Officer: John Endahl. Alexandria, VA: April 2019. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS-Volume2.pdf>. (OMB Control Number 0584–0596, expiration date 07/31/2017.)

several years of Congressional and administrative interventions, followed by two years of meal pattern waivers authorized by Congress in response to the public health emergency. As a result of these interventions, the 2012 whole grain-rich requirement and Sodium Target 2 have never been fully implemented; many operators would need to significantly adapt to return fully to the 2012 nutrition standards. Moreover, the 2012 milk requirements have not been fully implemented in more than five years. After careful consideration of the proposed rule and public comments, USDA believes that it is prudent to provide transitional standards in the near-term while further revisions to the meal pattern are considered and established through a new notice-and-comment rulemaking.

To ensure children were safely fed during the pandemic, schools served meals in ways they never had before, such as providing curbside meal service and delivering meals to children's homes. As noted in many comments, the pandemic has caused huge disruptions to the meal service, and school nutrition programs are stretched thin financially and limited in staff; respondents argued that children and staff both will need time to return to standard operations. They also noted that the pandemic has created temporary challenges, making it difficult for manufacturers and distributors to meet the demand for specific products, such as individually wrapped foods that many schools have relied on to provide a safe meal service during COVID-19. Vendors have unexpectedly canceled contracts because they could not fulfill product orders, or products have been redirected to other food service sectors. Schools have reported difficulty obtaining responses to food bid solicitations and have experienced unpredictable pricing, inadequate substitutions, and food outages. While USDA expects that these challenges will ultimately be transitory, USDA agrees that the school marketplace will require time to recover.

Schools have also reported staff shortages and hiring challenges,³¹

which have made it more difficult to safely prepare and serve meals that are compliant with certain meal pattern requirements. For example, staffing issues may make it harder to do scratch cooking. Altering recipes (59 percent) and increasing scratch cooking (28 percent) were two practices that SFAs planned to implement to meet sodium requirements, according to a USDA survey published in June 2021. Many SFAs (44 percent) also reported altering recipes as a practice to meet the whole grain-rich standard.³² Current staffing and hiring issues may make it difficult to implement these strategies to meet meal pattern requirements in the near-term.

Throughout the pandemic, USDA's priorities shifted to focusing on ensuring children continued to be fed while schools were closed and modifying the programs to be responsive to changing school environments, such as social distancing needs, staffing shortages, and supply chain disruptions, when schools reopened. This has primarily been accomplished through a series of nationwide waivers. The latest set of nationwide waivers, which includes the targeted school meal pattern waiver for SY 2021–2022, will expire on June 30, 2022.³³

Finalizing these transitional standards is also critical because according to public comments received, if the 2012 rule requirements apply beginning in SY 2022–2023, USDA has heard that the milk, whole grain, and sodium requirements would be extraordinarily difficult for all schools to implement successfully. As noted, previous implementation of these requirements was halted for years prior to the pandemic, and particularly in the case of sodium, go well beyond what is achievable given the current range of products available in the marketplace. In addition, in the near-term, schools are facing difficulties in procuring food and supplies due to manufacturer changes, canceled vendor or distributor contracts, product unavailability, unexpected and lower quality product substitutions, increased product pricing,

and supply chain disruptions; it is not clear how long it will take to fully recover from these disruptions. This final rule balances the need to allow adequate time to recover from these disruptions and prior implementation challenges, with the need to begin transitioning to stronger nutrition standards. This transitional standards approach will provide schools with the ability to make menu adjustments, procurement revisions, and personnel training necessary to transition back to traditional meal service after COVID-19 operations.

Therefore, after thoughtful deliberation of the current circumstances, review of comments received in response to the proposed rule as well as during stakeholder meetings, and consideration of the current *Dietary Guidelines*, USDA believes that school nutrition operators need the transitional standards outlined in this rule in the near-term, as the Department works diligently to further strengthen the school meal pattern requirements. The following sections explain the transitional standards made available through this final rule, which are effective until long-term standards are promulgated.

A. Milk Standards

As established by the 2012 final rule, current regulations at 7 CFR 210.10(d)(1)(i) and 220.8(d) permit only fat-free milk to be flavored in the NSLP and SBP; low-fat milk (1 percent fat) must be unflavored. However, for SY 2017–2018, Congress directed USDA to allow State agencies to grant exemptions allowing flavored, low-fat milk through the NSLP and SBP and as a competitive food available for sale, provided that schools demonstrated hardship.³⁴ For SY 2018–2019 and SY 2019–2020, the 2017 interim final rule and 2018 final rule allowed NSLP, SMP, SBP, and CACFP operators the option to serve flavored, low-fat milk as part of the reimbursable meal, and for schools, as a competitive beverage for sale on campus during the school day. Moreover, during the pandemic, USDA permitted schools to operate SFSP at the end of SY 2019–2020 and in SY 2020–2021; the SFSP does not include any limitations on milkfat or flavoring. For SY 2021–2022, USDA provided nationwide meal pattern waivers, which allowed SFAs to request targeted and justified waivers to serve flavored, low-fat milk.

³¹ 2019. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCSS-Volume2.pdf>. (OMB Control Number 0584–0596, expiration date 07/31/2017.)

³² A 2021 survey of school nutrition directors found that about 46 percent of survey respondents had reduced staffing, through reduction in hours, layoffs, or deferred hiring, since March 2020. School Nutrition Association. *Back to School 2021 Report: A Summary of Survey Results*. Available at: https://schoolnutrition.org/uploadedFiles/News_and_Publications/Press_Releases/Press_Releases/Back-to-School-Report-2021.pdf.

³³ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, *Child Nutrition Program Operations Study (CN-OPS-II): SY 2016–17*. Beyler, Nick, Jim Murdoch, and Charlotte Cabili. Project Officer: Holly Figueroa. Alexandria, VA: June 2021. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/CNOPS-II-SY2016-17.pdf>.

³⁴ USDA issued a series of nationwide waivers to allow non-congregate meal service, flexible meal times, parent or guardian meal pick-up, and other flexibilities. These waivers are available at: <https://www.fns.usda.gov/fns-disaster-assistance/fns-responds-covid-19/child-nutrition-covid-19-waivers>.

³⁵ Congress instructed the Secretary to provide State agencies this flexibility through the Consolidated Appropriations Act, 2017 (Pub. L. 115–31). Schools were required to demonstrate hardship by documenting a reduction in student milk consumption or increase in milk waste.

Additionally, Congress has directed USDA that it cannot restrict the offering of flavored, low-fat milk through Section 747 of Division A of the Consolidated Appropriations Act, 2017 (Pub. L. 115–31), and Section 789 of Division A of the Consolidated Appropriations Act, 2021 (Pub. L. 116–260).

2020 Proposed Rule and Public Comments

In the 2020 proposed rule, USDA proposed to continue to allow schools

the option to offer flavored, low-fat milk in reimbursable school meals. As described previously, this option has been available to schools in some form since SY 2017–2018. The proposed rule would have maintained the requirement that unflavored milk be offered at each meal service. For consistency, the flavored, low-fat milk option would have been extended to competitive beverages for sale on campus during the school day and would apply in the SMP and CACFP for participants ages 6 and

older. USDA also proposed a technical correction to clarify in CACFP regulations that lactose-free and reduced-lactose fluid milk meet the CACFP meal pattern requirements for fluid milk. In response to the 2020 proposed rule, USDA received 4,685 comments regarding the milk standard. The following table shows tallies of the total and unique comments received in response to the proposed milk standard:

2020 PROPOSED MILK STANDARD

Respondent position	Total milk comments (including form letters)	Percent of total milk comments	Unique milk comments	Percent of unique milk comments
Support	91	2	91	69
Mixed	8	<1	8	6
Oppose	4,585	97	33	25
Total	4,684	100	132	100

Comments in Support

A total of 91 comments supported the proposed milk standard. Proponents generally expressed concern related to the decline in children's milk consumption. They argued that allowing flavored, low-fat milk would provide schools more menu planning options, promote milk consumption, and lead to better health outcomes. State agency proponents argued that allowing additional variety in student milk choices may increase overall milk consumption. Proponents stated that increased milk consumption could result in greater intake of essential nutrients, such as vitamins A and D, magnesium, potassium, and calcium. A national nutrition advocacy group noted that flavored milk is an effective tool in encouraging milk consumption by school-aged children, and that school-aged children who drink flavored milk do not consume more added sugars, fat, or calories compared to non-milk drinkers. Proponents also stated that the minor increase in calories from flavored, low-fat milk could be offset with appropriate menu planning. They noted that the net increase in calories between fat-free and low-fat, flavored milk is small, due to progress made by dairy processors in reducing the calories in flavored milk. A national industry group noted that because flavored, low-fat milk is less likely to be wasted, more milk and more essential nutrients are consumed when flavored, low-fat milk is offered.

A national industry group also expressed support for the proposed change to clarify that lactose-free and reduced-lactose milk is an acceptable option in the CACFP. They noted that milk with lower lactose provides the same important nutrients as conventional milk and is an important offering for individuals with lactose intolerance. Lactose-free and reduced-lactose milk are also supported by the *Dietary Guidelines*.

Comments in Opposition

A total of 4,585 comments opposed the proposed milk standard. Opponents argued that allowing flavored, low-fat milk contradicts scientific literature regarding the known relationships between diet quality, overweight and obesity, cardiovascular disease, cancer, dental caries, and other negative health outcomes. One opponent cited a recent study that stated, "Excess added sugars, particularly in the form of sugar sweetened beverages, is a leading cause of tooth decay in U.S. children." Opponents also argued that the added calories from low-fat chocolate milk could increase the already alarming childhood obesity rates, and that research indicates there is very little room in the diet for calories from added sugars, providing additional reason not to allow flavored, low-fat milk. One opponent urged USDA to require schools to offer unflavored milk in the NSLP afterschool snack service, SMP, and CACFP. Some opponents stated that the proposed change is inconsistent with the *Dietary Guidelines*.

A State agency asserted that the proposed milk standard is not needed due to widespread acceptance of fat-free flavored milk and noted that with high levels of student acceptance for fat-free flavored milk, this change is unlikely to impact participation. Another opponent noted that virtually all SFAs have employed strategies to encourage milk consumption and encouraged USDA to address any remaining challenges through training and technical assistance instead of the proposed change.

Mixed Response

Eight respondents expressed conditional support or opposition or offered suggestions for improving the proposed milk standard. For example, an individual respondent advised USDA to establish limits for sugar in flavored milk. Similarly, a healthcare professional noted that sweetened beverages and added sugars are areas of concern for child nutrition and recommended that USDA adopt nutrition standards consistent with those findings. Several opponents recommended that if USDA allows flavored, low-fat milk, a calorie limit of no more than 130 calories per 8 ounce serving should be established, consistent with the Robert Wood Johnson's Healthy Eating Research Healthier Beverage Guidelines. A number of respondents also suggested that USDA allow whole milk for health reasons.

Transitional Standard and Considerations for Future Rulemaking

This final rule will provide NSLP and SBP operators with the transitional option to offer flavored, low-fat (1 percent fat) milk in reimbursable school meals and require that unflavored milk be offered at each meal service. For consistency, the flavored, low-fat milk option will be extended to competitive beverages for sale on the school campus during the school day and will also apply in the SMP and CACFP for participants ages 6 and older. USDA recognizes that regulatory consistency across programs, a long-time goal at USDA, facilitates program administration and operation at the State and local levels, fosters support, and meets stakeholder expectations.³⁵

The final rule's adoption of the proposed milk standards balances various factors, including the lack of full implementation of the 2012 rule milk standards in recent years and the current *Dietary Guidelines*. Section 9(f)(1) of the National School Lunch Act, as amended, 42 U.S.C. 1758(f)(1), requires that school meals are consistent with the goals of the latest *Dietary Guidelines*.³⁶ Milk is a popular item among children and is an important source of calcium, vitamin D, and potassium—nutrients under consumed by the U.S. population.³⁷ Flavored milk has received high palatability ratings from children³⁸ and has been shown to encourage milk consumption among school-aged children.³⁹ Studies indicate

that children drink more flavored milk than unflavored milk, and that flavored milk served in the school meal programs is wasted less than unflavored milk.⁴⁰ USDA appreciates concerns raised by comments regarding flavored milk, and as detailed below, will consider them in greater detail in the subsequent rulemaking. While USDA appreciates comments on whole milk, allowing whole milk in the school meal programs would not align with recommendations in the *Dietary Guidelines, 2020–2025*.

USDA is committed to ensuring that school meals provide children with nutrient-dense foods that are consistent with the goals of the *Dietary Guidelines*. Flavored milks (both fat-free and low-fat) contain added sugars, and USDA will consider their contribution to the overall amount of added sugars in school meals as it develops subsequent meal pattern regulations to follow this final rule. The *Dietary Guidelines, 2020–2025* recommend that intake of beverages high in added sugars be limited, and that added sugars consist of no more than 10 percent of total calories per day for children aged 2 years and older. Although there are currently no added sugars limits in the school meal programs, because the NSLP and SBP calorie limits apply to the meals offered on average over the school week, SFAs that choose to offer flavored, low-fat milk will need to plan menus carefully to ensure that they stay within the required calorie limits. SFAs should consult with their State agency as necessary to make proper menu adjustments.

Consistent with the proposed rule, this final rule also requires that NSLP and SBP operators that choose to offer flavored milk must also offer unflavored milk (fat-free or low-fat) at the same meal service. This requirement ensures that milk variety in the NSLP and SBP is not limited to flavored milk choices, and that the most nutrient-dense form of milk is always available. USDA recognizes the importance of having unflavored milk as a choice for students at each lunch and breakfast service. The requirement to ensure that unflavored milk is available on the school menu will not apply in the NSLP afterschool snack service, the SMP, or the CACFP, consistent with existing requirements; these programs do not have a

requirement to offer a variety of fluid milk as they are smaller in size and resources than the school lunch and breakfast programs.⁴¹

It is important to note that offering flavored milk (low-fat and/or fat-free) is an option, not a requirement, and operators may choose not to offer flavored milk. For example, the local school wellness policy provides students, parents and guardians, and interested community members the opportunity to influence the school nutrition environment at large (see 7 CFR 210.31). Some individual schools and school districts have opted to remove all flavored milk from school meal menus via local wellness policies to reduce students' added sugars consumption. Schools may also consider placing unflavored milk in visible locations in the school cafeteria to encourage children to select it instead of flavored milk.

This final rule also makes a technical correction in SMP and CACFP regulations to clarify that lactose-free and reduced-lactose fluid milk meet the SMP and CACFP requirements for fluid milk; no written request or statement is required for a school, institution, or facility to offer lactose-free or reduced-lactose fluid milk. This language aligns with other Program regulations, which state that lactose-free and reduced-lactose fluid milk may be served to meet the fluid milk requirement (see 7 CFR 210.10(d)(1)(i) (NSLP) and 220.8(d) (SBP)). Allowing lactose-free milk is consistent with the *Dietary Guidelines*. It also helps to increase access to the nutritional benefits of milk among populations that are more likely to experience lactose intolerance.⁴² This

³⁵ The Office of Management and Budget's implementing memorandum, M–11–10, for Executive Order 13563, "Executive Order 13563, 'Improving Regulation and Regulatory Review,'" discusses the importance of consistency for regulatory requirements. February 2, 2011. Available at <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2011/m11-10.pdf>.

³⁶ U.S. Department of Agriculture and U.S. Department of Health and Human Services. *2020–2025 Dietary Guidelines for Americans*. 9th Edition. December 2020. Available at: <https://www.dietaryguidelines.gov/>.

³⁷ Cohen JFW, Richardson S, Rimm EB. *Impact of the Updated USDA School Meal Standards, Chef-Enhanced Meals, and the Removal of Flavored Milk on School Meal Selection and Consumption*. J Acad Nutr Diet. May 29, 2019 May 29. Available at: <https://pubmed.ncbi.nlm.nih.gov/31153957/>.

³⁸ Fayet-Moore F. (2016). *Effect of flavored milk vs plain milk on total milk intake and nutrient provision in children*. Nutrition Reviews; 74(1). Available at: <https://academic.oup.com/nutritionreviews/article/74/1/1/1905542>.

³⁹ Nutrition Standards for Foods in Schools: Leading the Way Toward Healthier Youth ("IOM Report"), Institute of Medicine, page 58. Available at: <http://www.nationalacademies.org/hmd/Reports/2007/Nutrition-Standards-for-Foods-in-Schools-Leading-the-Way-toward-Healthier-Youth.aspx>. See also: Mary M. Murphy et al., *Drinking Flavored or Plain Milk is Positively Associated with Nutrient Intake and Is Not*

Associated with Adverse Effects on Weight Status in U.S. Children and Adolescents.

⁴⁰ A USDA study found that the mean percentage of wasted milk was highest for unflavored, fat-free and low-fat milks, and lowest for flavored, fat-free and low-fat milk. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS-Volume4.pdf>. (OMB Control Number 0584–0596, expiration date 07/31/2017.)

⁴¹ Please note, while operators of NSLP afterschool snack, SMP, and CACFP are not required to offer a variety of fluid milk to all participants, operators of the Child Nutrition Programs are required to provide meal modifications to ensure that participants with disabilities have an equal opportunity to participate in and benefit from the programs. This would include providing participants with a substitute for milk, as needed, due to a disability. See: *Accommodating Disabilities in the School Meal Programs: Guidance and Q&As*, <https://www.fns.usda.gov/cn/accommodating-disabilities-school-meal-programs-guidance-qas> and *Modifications to Accommodate Disabilities in CACFP and SFSP*, <https://www.fns.usda.gov/cn/modifications-accommodate-disabilities-cacfp-and-sfsp>.

⁴² According to the National Institute of Diabetes and Digestive and Kidney Diseases, in the United States, African Americans, American Indians, Asian Americans, and Hispanics/Latinos are more likely to have the symptoms of lactose intolerance. Lactose intolerance is least common among people who are from, or whose families are from, Europe. *Definition & Facts for Lactose Intolerance*. Available at: <https://www.niddk.nih.gov/health-information/digestive-diseases/lactose-intolerance/definition-facts>.

clarification builds greater consistency in Program regulations and is expected to reduce confusion for SMP and CACFP operators, as well as families. Accordingly, this final rule amends 7 CFR 210.10(d)(1)(i); 210.11(m)(1)(ii), (m)(2)(ii) and (m)(3)(ii); 215.7a(a); 220.8(d); 226.20(a)(1)(iii); and 226.20(c)(1), (2), and (3), to allow NSLP and SBP operators to offer flavored, low-fat milk as part of a reimbursable meal and for sale as a competitive beverage, and allow flavored, low-fat milk in the SMP and in the CACFP for participants ages 6 and older. It also clarifies that lactose-free and reduced-lactose fluid milk meet the SMP and CACFP requirements for fluid milk. USDA invites public comments on the milk standards discussed in this final rule. These public comments will help to inform USDA’s future rulemaking.

B. Whole Grain-Rich Standards

As established by the 2012 final rule, current NSLP and SBP regulations at 7 CFR 210.10(c)(2)(iv) and 220.8(c)(2)(iv) require all grains offered in school meals to meet the USDA whole grain-rich criteria. To meet USDA’s whole grain-rich criteria, a product must contain at least 50 percent whole grains, and the remaining grain content of the product must be enriched. However, successive legislative and administrative action beginning in 2012 prevented full implementation of the whole grain-rich requirement. Prior to the vacatur of the 2018 final rule, in SY 2019–2020, at least 50 percent of the weekly grains offered in the NSLP and SBP were required to be whole grain-rich.

The requirement to offer exclusively whole grain-rich products proved challenging for some school districts. For example, while some schools have successfully implemented the whole grain-rich requirement, others have cited student acceptance, higher costs, and a lack of available products as barriers to meeting the requirement.⁴³ As noted, in SY 2014–2015, only 27 percent of NSLP menus were offering 100 percent of grains as whole grain-rich.⁴⁴ Due to a long history of administrative and legislative actions allowing exemptions, this requirement was never fully implemented nationwide. Seeking to assist schools, USDA allowed enriched pasta exemptions for SY 2014–2015 and SY 2015–2016, and Congress expanded the pasta flexibility to include other grain products. Through successive legislative action, Congress directed USDA to allow State agencies to grant individual whole grain-rich exemptions (Section 751 of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113–235); and Section 733 of the Consolidated Appropriations Act, 2016 (Pub. L. 114–113). In addition, Section 747 of the Consolidated Appropriations Act, 2017 (Pub. L. 115–31) (2017 Appropriations Act) provided flexibilities related to whole grains for SY 2017–2018. More recently, Section 101(a)(1) of Division D of the Continuing Appropriations Act, 2018 and Supplemental Appropriations for Disaster Relief Requirements Act, 2017 (Pub. L. 115–56), enacted September 8, 2017, extended the flexibilities provided by Section 747 of the Consolidated Appropriations Act, 2017 through

December 8, 2017. The 2017 Appropriations Act provided authority for whole grain-rich exemptions through the end of SY 2017–2018, and the interim final rule (82 FR 56703, November 30, 2017) extended the availability of exemptions through SY 2018–2019. For SY 2017–2018, a total of 4,297 SFAs (about 23 percent of SFAs operating the school meal programs) submitted whole grain-rich exemption requests for specific products based on hardship, and nearly all (4,124) received exemption approval from their State agency. In addition, during the pandemic, USDA permitted schools to operate SFSP at the end of SY 2019–2020 and in SY 2020–2021; the SFSP meal standards do not include a whole grain-rich requirement. USDA also provided nationwide meal pattern waivers through SY 2021–2022, which allowed SFAs to request flexibility for the whole grain-rich requirements on a case-by-case basis.

2020 Proposed Rule and Public Comments

In the 2020 proposed rule, USDA proposed to require that at least half of the weekly grains offered in the NSLP and SBP meet the whole grain-rich criteria specified in USDA guidance, and that the remaining grain items offered must be enriched. In response to the 2020 proposed rule, USDA received 4,710 comments regarding the whole grain-rich standard. The following table shows tallies of the total and unique comments received in response to the proposed whole grain-rich standard:

2020 PROPOSED WHOLE GRAIN-RICH STANDARD

Respondent position	Total whole grain-rich comments (including form letters)	Percent of total whole grain-rich comments	Unique whole grain-rich comments	Percent of unique whole grain-rich comments
Support	112	2	108	70
Mixed	6	<1	6	4
Oppose	4,592	97	40	26
Total	4,710	100	154	100

⁴³ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, *Child Nutrition Program Operations Study (CN–OPS–II): SY 2016–17*. Beyler, Nick, Jim Murdoch, and Charlotte Cabili. Project Officer: Holly Figueroa. Alexandria, VA: June 2021. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/CNOPS-II-SY2016-17.pdf>.

⁴⁴ See: “All Grains are Whole Grain Rich: Percentage Meeting Requirement” in Table C.14 of *School Nutrition and Meal Cost Study, Final Report Volume 2: Nutritional Characteristics of School Meals* by Elizabeth Gearan, Mary Kay Fox, Katherine Niland, Dallas Dotter, Liana Washburn, Patricia Connor, Lauren Olsho, and Tara Wommak. Project Officer: John Endahl. Alexandria, VA: April 2019. Available at: [https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS-](https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS-Volume2.pdf)

[Volume2.pdf](https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS-Volume2.pdf). (OMB Control Number 0584–0596, expiration date 07/31/2017.) Note: In SY 2014–2015, the most recent school year that USDA data is available, all grains were supposed to be whole grain-rich. However, State agencies had the option of granting exemptions to this requirement if an SFA demonstrated hardship in procuring compliant whole grain-rich products that were acceptable to students.

Comments in Support

There were 112 comments in support of the proposed whole grain-rich standard. Several proponents reasoned that a reduction in the whole grain-rich requirement was needed because many products (such as pasta, bread, sushi rice, and tortillas), including some regional products (such as grits and biscuits), are not acceptable to students in a whole grain-rich form. A State agency agreed with the proposal, arguing that it would provide the right balance of whole grain-rich and enriched grain products. That State agency also affirmed the proposed standard would allow SFAs to serve grain products that children would enjoy, while still exposing children to more whole grain-rich products.

A food industry proponent suggested that whole, fortified, and enriched grains provide shelf-stable and cost-efficient options; they argued that all grains, including those that are refined but fortified and enriched, are a reliable choice for schools. Another food industry proponent agreed, asserting that a variety of grain choices, both whole and enriched, have the potential to increase consumption of shortfall nutrients identified by the *Dietary Guidelines*, particularly dietary fiber, folate, and iron. Other proponents stated that more time is necessary for the food industry and school food service professionals to develop whole grain-rich products and recipes that students enjoy. Several proponents asserted that whole grain versions of certain foods, including tortillas, pizza crust, and pasta, suffer from quality issues (for example, crumbly, dry, or poor consistency) that make them difficult to serve in a school meal setting.

Some proponents noted that there are currently not enough options for whole grain-rich products, and that whole grain-rich products are not always available in the necessary quantities. One advocacy group asserted that requiring all grain items on school menus to be whole grain-rich is costly and unrealistic. Proponents suggested that requiring only 50 percent of grains offered to be whole grain-rich would ease procurement concerns in rural school districts, where they suggested some whole grain-rich items are difficult to obtain.

Comments in Opposition

A total of 4,592 comments opposed the proposed whole grain-rich standard. Some opponents voiced concern that the proposed change would make it more difficult for schools to procure whole grain-rich products, because

there would be less incentive for the food industry to develop compliant products. One advocacy group suggested that without this incentive, fewer companies would choose to produce whole grain-rich products, meaning that whole grain-rich products would be less widely available and more expensive for schools that wish to serve them.

Several policy advocacy groups, a professional association, and a State agency asserted that most schools had met the stricter 100 percent whole grain-rich requirement—with some States not needing any whole grain-rich waivers, some States requesting waivers for only one product type (such as pasta), and other States not allowing waivers. These opponents remarked that all schools should be able to meet the 100 percent whole grain-rich standard. A State agency opponent maintained that schools in their State have continued to offer 100 percent whole grain-rich products, and they are seeing high rates of student acceptance.

Several opponents argued that the proposed change is inconsistent with the *Dietary Guidelines* and does not support children's health. Many opponents noted that eating more whole grains is associated with reduced risk of heart disease, stroke, colon cancer, and diabetes, and provides more nutrients and fiber. Opponents also stated that USDA's 2019 School Nutrition and Meal Cost Study found one of the factors most highly correlated with improved school lunch nutritional quality was having met the 100 percent whole grain-rich requirement.

A State agency opponent described their experience implementing the 100 percent whole grain-rich requirement, asserting that despite initial challenges that involved additional training, implementation of the standard was ultimately successful, and the State now sees very high rates of compliance. Another State agency opponent argued that the proposed standard would be more difficult for SFAs to track and for the State agency to monitor, compared to the 2012 whole grain-rich requirement, and would therefore create additional administrative burden for both SFAs and State agencies.

Mixed Response

Six respondents expressed conditional support or opposition, or offered suggestions for improving the proposed whole grain-rich standard. For example, one State agency opposed the proposed change, but suggested USDA allow exceptions for quality and availability issues. This State agency also emphasized the importance of

ensuring USDA standards expand access to and consumption of whole grain-rich foods.

Some respondents offered an approach in between the proposed standard and the 2012 standard. For example, a nutritionist noted that most schools in their State already exceed the 50 percent threshold and recommended an 80 percent whole grain-rich requirement. They argued that this approach would be consistent with the science of the *Dietary Guidelines*, while allowing schools to serve certain products, such as pasta and biscuits, in a form students find more appealing. Similarly, two respondents expressed support for a 75 percent threshold, maintaining that it would appropriately balance the goals of the *Dietary Guidelines* with the importance of meeting student preferences and encouraging student participation. A State agency also supported a 75 percent threshold, arguing that the proposed 50 percent threshold would cause the nutritional integrity of the meals to suffer. Another State agency recommended USDA allow schools to serve one item per week that is not whole grain-rich. One respondent noted the benefits of whole grains but suggested an in between approach where USDA require half of grains to be whole grain, and one quarter to be enriched grains.

One food industry respondent opposed the proposed change, and instead expressed support for returning to the 2012 standard. However, they recommended delaying implementation of the 100 percent whole grain-rich standard to SY 2024–2025. The food industry respondent argued that delaying implementation would allow SFAs adequate time to develop menus and recipes with whole grain-rich foods and would enable industry to continue to invest in the development and manufacturing of whole grain-rich foods that are acceptable to children. This respondent recommended delaying implementation to SY 2024–2025 in recognition of the impact of COVID–19 on schools.

Transitional Standard and Considerations for Future Rulemaking

As recommended by comments, this rulemaking adopts a balanced approach that recognizes the need for transitional meal pattern improvements in the short-term. As noted by a State agency and other respondents, setting a standard between the proposed rule and the 2012 rule allows schools to serve foods their students enjoy and find palatable, which could increase student satisfaction and participation, while

helping to advance the nutritional integrity of school meals. Respondents noted that schools have successfully incorporated many whole grain-rich items on their menus, and manufacturers have improved many whole grain-rich products, but currently, there are still some products that students have trouble accepting.

USDA agrees with comments suggesting a transitional standard in between the proposed rule and 2012 rule is appropriate. In addition, after considering comments, USDA agrees that increasing the whole grain-rich standard beyond what was proposed is achievable and appropriate and is an important step in advancing nutrition security. A standard between 50 and 100 percent will balance the importance of strengthening the whole grain-rich requirements with the difficulties currently facing some schools, such as supply chain disruptions, financial challenges, and staffing limitations related to COVID-19. This rule will serve as a middle-ground bridge until the notice-and-comment rulemaking for SY 2024–2025 and beyond is complete.

In determining what the transitional standard should be, USDA looked for an achievable standard that still moved meaningfully forward. As mentioned, comments suggested a variety of middle-ground thresholds, including 80 percent. The proposed rule also noted that, according to a study conducted in SY 2014–2015, the most recent USDA data available, 70 percent of weekly school menus offered at least 80 percent of the grain items as whole grain-rich.⁴⁵ Therefore, USDA finds that requiring at least 80 percent of the weekly grains offered in the NSLP and SBP to be whole grain-rich is an appropriate transitional standard. The remaining grain items offered must be enriched. Under this whole grain-rich requirement, SFAs are expected to procure and incorporate a significant amount of whole grain-rich product into their NSLP and SBP menus, but will

have the ability to serve enriched grains when whole grain-rich products are not available or when certain products are not acceptable to students in whole grain-rich form.

The current *Dietary Guidelines* recommend that at least half of total grains consumed should be whole grains. The *Dietary Guidelines* also note that while school-age children, on average, meet the recommended intake of total grains, they do not meet the recommendation to make half of their grains whole grains. With this final rule, USDA is continuing to advance the important progress made in improving school nutrition standards. Compared to the nutrition requirements that were in effect prior to COVID-19, this transitional rule provides meaningful, achievable improvements in the whole grain-rich standard, while continuing to be responsive to the current needs of schools. The 80 percent requirement is consistent with and based on the *Dietary Guidelines, 2020–2025* recommendation regarding consumption of more whole grains and is intended to be a transitional threshold as USDA works to enhance the meal pattern standards in a way that reflects the latest nutrition science.⁴⁶

The requirement that at least 80 percent of the weekly grains offered in the NSLP and SBP are whole grain-rich is a minimum standard, not a maximum. It reflects a practical and feasible way to work towards the *Dietary Guidelines'* emphasis on increasing whole grain consumption as USDA considers further changes in a future rulemaking. Requiring at least 80 percent—as opposed to the proposed 50 percent—of the weekly grains offered in the NSLP and SBP to be whole grain-rich is a standard that many schools were able to accomplish prior to the COVID-19 pandemic. This achievable, transitional standard gives schools the ability to plan healthy meals that reflect regional and cultural student preferences and allows the food industry time to develop more whole grain-rich products that students find acceptable. A 2021 survey of school nutrition directors found that 49 percent of respondents considered product or ingredient availability to be a significant challenge in meeting the whole grain-rich requirement. Another 44 percent of

respondents considered product or ingredient availability to be a moderate challenge.⁴⁷ This is consistent with USDA research that found that 45 percent of SFA respondents identified lack of available products as a challenge to meeting the whole grain-rich requirement. SFAs also identified purchasing whole grain-rich products as the top strategy to meet this requirement, suggesting that product availability is key to success in meeting the whole grain-rich standard.⁴⁸

Schools already offering all grains as whole grain-rich do not have to change their menus as a result of this final rule and are encouraged to continue exceeding the minimum regulatory standard. For other schools, 7 CFR 210.12(a) allows students, parents and guardians, and community members to influence menu planning at the local level; USDA encourages the school community to provide ideas on how to incorporate more whole grain-rich products in the breakfast and lunch menus at their local school. USDA appreciates comments that suggested allowing exceptions or waivers to the whole grain-rich requirement on an as-needed basis; however, USDA's waiver authority under the National School Lunch Act does not allow the Secretary to issue individual or statewide waivers related to the meal pattern requirements. Therefore, USDA does not have the authority to waive the whole grain-rich requirement on an as-needed basis.⁴⁹

Studies have demonstrated the importance of school meals in improving children's overall diets, including their whole grain consumption.^{50 51} Whole grains are a

⁴⁷ School Nutrition Association. *Back to School 2021 Report: A Summary of Survey Results*. Available at: https://schoolnutrition.org/uploadedFiles/News_and_Publications/Press_Releases/Press_Releases/Back-to-School-Report-2021.pdf.

⁴⁸ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, Child Nutrition Program Operations Study (CN-OPS-II): SY 2016–17. Beyler, Nick, Jim Murdoch, and Charlotte Cabili. Project Officer: Holly Figueroa. Alexandria, VA: June 2021. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/CNOPS-II-SY2016-17.pdf>.

⁴⁹ Temporary authority provided by Congress has permitted USDA to issue whole grain-rich exemptions or meal pattern waivers in the past; for example, in response to the COVID-19 public health emergency. However, USDA does not have the authority to issue these waivers without Congressional intervention.

⁵⁰ Bing-Hwan Lin, Joanne F. Guthrie, Travis A. Smith, *Dietary Guidance and New School Meal Standards: Schoolchildren's Whole Grain Consumption Over 1994–2014*, American Journal of Preventive Medicine, Volume 57, Issue 1, July 2019. Available at: <http://www.sciencedirect.com/science/article/pii/S0749379719300546>.

⁴⁵ See footnote 41 of *Restoration of Milk, Whole Grains, and Sodium Flexibilities*, November 25, 2020. Available at: <https://www.federalregister.gov/documents/2020/11/25/2020-25761/restoration-of-milk-whole-grains-and-sodium-flexibilities#footnote-41-p75252>. See also: “All Grains are Whole Grain Rich: Percentage Meeting Requirement and Percentage Below Requirement” in Tables C.14 and E.14 of *School Nutrition and Meal Cost Study, Final Report Volume 2: Nutritional Characteristics of School Meals* by Elizabeth Gearan, Mary Kay Fox, Katherine Niland, Dallas Dotter, Liana Washburn, Patricia Connor, Lauren Olsho, and Tara Wommak. Project Officer: John Endahl. Alexandria, VA: April 2019. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS-Volume2.pdf>. (OMB Control Number 0584–0596, expiration date 07/31/2017.)

⁴⁶ As noted by the court in *CSPI*, the statutory language requiring that meals be “consistent with” *Dietary Guidelines* and that regulatory meal pattern standards be “based on” the *Dietary Guidelines* (see 42 U.S.C. 1758(f)(1)(A) and (a)(4)(B)) is sufficiently general to allow for meal pattern standards that use the *Dietary Guidelines* as a starting point and align with general recommended goals, rather than exactly replicating specific quantitative standards. See 438 F. Supp. 3d at 562–63.

good source of dietary fiber, and consumption of whole grains is associated with reduced risk of cardiovascular disease, type 2 diabetes, and certain cancers. In acknowledgement of the health benefits of whole grains, USDA encourages schools to incorporate whole grain-rich products in their menus as often as possible, especially in popular foods such as pizza or sandwich rolls. USDA will continue to provide training and technical assistance to assist in these efforts. In addition, USDA Foods will continue to make whole grain-rich products available to schools. For example, whole grain-rich USDA Foods available to schools for SY 2021–2022 included flour, rolled oats, pancakes, tortillas, and several varieties of pasta and rice.

Accordingly, this final rule amends 7 CFR 210.10(c)(2)(iv)(B) and 220.8(c)(2)(iv)(B), to require that at least 80 percent of the weekly grains offered in the NSLP and SBP meet the whole grain-rich criteria specified in USDA guidance. USDA invites public comments on the whole grain-rich standards discussed in this final rule. These public comments will help inform USDA's future rulemaking.

C. Sodium Standards

To avoid excessive sodium intake in school meals, the 2012 final rule

established sodium target limits at 7 CFR 210.10(f)(3) and 220.8(f). These targets were developed through a review of scientific literature; consultation with public health professionals, industry, and other entities involved in sodium reduction efforts; and recommendations from the National Academy of Medicine (formerly the Institute of Medicine). Based on this research, the 2012 final rule included three transitional targets to gradually reduce sodium intake over a 10-year period. The initial target, Sodium Target 1 for NSLP, was determined as a 10 percent reduction from the average sodium content offered for lunch in SY 2004–2005.⁵² Similarly, Sodium Target 1 for SBP was determined as a 5 percent reduction from the average sodium content offered for breakfast. The Final Sodium Target was developed using the 2005 Tolerable Upper Intake Levels (UL) for sodium in the Dietary Reference Intakes (DRI) for each age group at the current time. The Final Sodium Target would require significant efforts by the food industry to reformulate and develop new products lower in sodium. Sodium Target 2 represented an intermediate target achievable with product reformulations using technology available to industry when the 2012 rule was under development.

Prior to the vacatur of the 2018 final rule, successive legislative and

administrative action delayed implementation of the sodium reduction targets. At the time of the court vacatur, schools were required to meet Sodium Target 1; with the court vacatur, Sodium Target 2 immediately went into effect. However, during the pandemic, USDA permitted schools to operate SFSP, which does not have a sodium limit, at the end of SY 2019–2020 and in SY 2020–2021. USDA also provided nationwide targeted meal pattern waivers through SY 2021–2022, which allowed SFAs to serve meals that did not meet the sodium targets, throughout that period. As a result, schools have never had to implement Sodium Target 2.

2020 Proposed Rule and Public Comments

The 2020 proposed rule sought to maintain Sodium Target 1 requirements through SY 2023–2024 (June 30, 2024); to delay required compliance with Target 2 requirements to SY 2024–2025 (July 1, 2024); and to remove the Final Target. In response to the 2020 proposed rule, USDA received 4,710 comments regarding the sodium standards. The following table shows tallies of the total and unique comments received in response to the proposed sodium standards:

2020 PROPOSED SODIUM STANDARDS

Respondent position	Total sodium comments (including form letters)	Percent of total sodium comments	Unique sodium comments	Percent of unique sodium comments
Support	94	2	90	58
Mixed	34	<1	34	22
Oppose	4,582	97	30	19
Total	4,710	100	154	99

Comments in Support

Ninety-four comments supported the proposed sodium standards. Many proponents discussed the work done by school food service professionals, manufacturers, and vendors in striving to meet Sodium Targets 1 and 2 and their commitment toward gradual sodium reduction over time. However, proponents also expressed concern about student acceptance of lower sodium meals because students are accustomed to eating foods with higher

sodium content outside of school. Some proponents predicted Sodium Target 2 would create more food waste, or that decreasing sodium to the Final Target would result in lower student participation. One proponent suggested the proposed sodium standards provide schools with “desperately needed time” for gradual sodium reduction by temporarily retaining Target 1, continuing to Target 2 in SY 2024–2025, and eliminating the Final Target; this respondent also acknowledged the

considerable work already done by schools to meet Target 1.

One proponent reasoned it does not make sense to move to a lower sodium target until manufacturers find a way to make low-sodium foods taste better. Several proponents stated sodium naturally occurs in some foods, such as meat and milk, and it would be difficult to reduce sodium levels without removing these items from menus. A national industry group and a food manufacturer argued that some foods require certain levels of sodium for

⁵¹ Aune D, Keum N, Giovannucci E, Fadnes LT, Boffetta P, Greenwood DC, Tonstad S, Vatten LJ, Riboli E, Norat T. *Whole grain consumption and risk of cardiovascular disease, cancer, and all cause and cause specific mortality: systematic review and*

dose-response meta-analysis of prospective studies. BMJ. June 2016. Available at: <https://pubmed.ncbi.nlm.nih.gov/27301975/>.

⁵² Institute of Medicine (IOM 2010). *School Meals: Building Blocks for Healthy Children.*

Washington, DC: The National Academies Press. Available at: <https://fns-prod.azureedge.net/sites/default/files/SchoolMealsIOM.pdf>.

functional and food safety reasons, making it particularly difficult to formulate lower sodium options without increasing food safety risk, increasing food waste, and decreasing shelf-life.

Comments in Opposition

A total of 4,582 comments opposed the proposed sodium standards. Several opponents were concerned that the proposed changes are not consistent with current nutrition science and may exacerbate the already high rates of nutrition-related chronic disease in the United States. Some opponents, including advocacy groups and professional associations, argued the delay of Target 2 and the elimination of the Final Target would conflict with the dietary reference intake guidelines for sodium. They cited a 2019 report warning that exceeding recommended sodium levels could increase chronic disease risk within a healthy population. These opponents noted that the National Academies of Sciences, Engineering, and Medicine had pursued even stronger sodium recommendations for younger children than those levels established when the 2012 rule was finalized. The *Dietary Guidelines, 2020–2025* were not yet published during the proposed rule comment period, but a joint comment from advocacy groups and professional associations expected the updated *Dietary Guidelines* to recommend that children consume a level of sodium below that achieved by Target 2. The respondents asked that USDA wait until after *Dietary Guidelines, 2020–2025* were issued to address sodium levels, and recommended USDA set a “realistic” timetable for achieving sodium reduction in the long-term based on the updated *Dietary Guidelines*.

Opponents noted excess sodium intake is associated with higher risk of high blood pressure, heart disease, stroke, atrial fibrillation, aortic dissection, and osteoporosis. They stated the proposed targets could result in children ages 4–13 years old who participate in the NSLP and SBP exceeding the current recommended daily limits for sodium intake. Multiple opponents cited a Centers for Disease Control and Prevention report that found 9 in 10 children consume too much sodium. An advocacy group stated that delaying further sodium reduction is inconsistent with the *Dietary Guidelines*, tested nutritional research, and nutrition recommendations. A professional association argued that the delay of Target 2 and the elimination of the Final Target would harm children’s health, citing several sources describing the

health risks associated with excess sodium consumption. Several State attorneys general expressed concern that the proposed changes to the sodium limits could worsen health disparities for racial and ethnic minority groups.

Opponents noted many schools have already made healthy and appealing meals with less sodium. They argued the proposed standards would reduce demand for low-sodium products, making it harder for schools to find low-sodium products because the school food industry will be slower to develop and market them. Several opponents argued that schools have successfully reduced sodium in meals to meet Sodium Target 1, and products are already on the market to help schools meet Target 2 and the Final Target. One opponent claimed that popular school pizza brands have reduced sodium levels. They also noted that food manufacturers are engaged in voluntary sodium reduction efforts, and expected these efforts to intensify when the U.S. Food and Drug Administration (FDA) releases voluntary sodium reduction targets for processed, packaged, and restaurant foods. FDA’s voluntary sodium reduction targets were released in October 2021. Some opponents encouraged USDA to continue to support schools’ efforts to reduce sodium through enhanced training and technical assistance.

Mixed Response

Thirty-four respondents expressed conditional support or opposition, or offered suggestions for improving the proposed sodium standards. Trade associations, State agency employees, a nutritionist, and a couple of individual respondents expressed support for delaying the sodium targets to allow schools and industry more time to achieve gradual sodium reduction. One respondent stressed the importance of acting upon nutrition research related to sodium, but agreed it was appropriate to afford schools more time to reduce sodium. One State agency supported extending Target 1 through SY 2023–2024 and delaying Target 2 to SY 2024–2025, noting that this would allow the food industry more time for product development and reformulation, provide SFAs more time to procure and introduce lower sodium food products, and give students more time to adjust to school meals with lower sodium content. Another State agency supported postponing Target 2 implementation, and supported a “reexamination,” but not full removal, of the Final Target. This State agency also encouraged USDA to continue working with the food industry to

improve the nutritional profile of foods across the board, not just to the K–12 market, noting that some school districts and residential child care institutions purchase foods through smaller markets and may not have access to major food distributors. An advocacy group expressed a similar view, recommending that Target 2 become the Final Target, pending the final evaluation of FDA’s voluntary sodium reduction targets at a later date. Other State agencies expressed similar support for temporarily delaying implementation of Target 2, to allow more time for product reformulation and COVID–19 recovery, but did not comment on the proposal to eliminate the Final Target. One of these State agencies applauded the work by school nutrition professionals in their State to decrease the sodium content of school meals over the past decade, noting that schools continue to develop and utilize recipes that support the gradual reduction of sodium over time.

Several respondents recognized the need to reduce sodium in school meals, but argued that the sodium targets and reduction timelines in the 2012 proposed rule are too aggressive. For example, a school district employee stated their district was able to meet Sodium Target 1, but asserted that Sodium Target 2 would be more difficult to meet, or potentially, unattainable. Some respondents suggested USDA retain Sodium Target 1 indefinitely, or argued that Sodium Target 2 was overly restrictive. A food manufacturer noted that, while it could adjust its formulas to reduce sodium, taste would be compromised.

Transitional Standards and Considerations for Future Rulemaking

USDA agrees with comments that noted the importance of gradually moving towards lower sodium meals in a way that is achievable for schools and the food industry. This final rule maintains Sodium Target 1 for NSLP and SBP through SY 2022–2023, retains Sodium Target 1 for SBP in SY 2023–2024, and institutes a modified Sodium Interim Target 1A for NSLP beginning in SY 2023–2024.⁵³ These standards, which are meant to be transitional, are shown in the charts below. USDA recognizes the importance of decreasing sodium in school meals, for which the majority of comments advocated. The approach in this final rule positions SFAs on an achievable path toward

⁵³ USDA fully expects to have new standards in place for SY 2024–2025 and beyond. However, in case of an unanticipated delay, the standards set by this rule will remain legally effective until such time as subsequent standards are promulgated.

further sodium reduction in school meals, and responds to school concerns about product availability, discussed in detail later in this section. As discussed earlier, USDA will promulgate a new rulemaking to address sodium standards in SY 2024–2025 and beyond. Since

USDA intends the standards in this final rule as transitional standards, this rule eliminates Target 2 or any stricter sodium standard for SY 2024–2025 and beyond. However, this does not mean USDA intends to permanently eliminate stricter sodium standards in the long-

term. Rather, this rule implements transitional sodium standards until USDA develops long-term standards that will further advance nutrition security.

NATIONAL SCHOOL LUNCH PROGRAM TRANSITIONAL SODIUM TIMELINE & LIMITS

Age/grade group	Target 1: Effective July 1, 2022 (mg)	Interim Target 1A: Effective July 1, 2023 (mg)
K–5	<1,230	<1,110
6–8	<1,360	<1,225
9–12	<1,420	<1,280

SCHOOL BREAKFAST PROGRAM TRANSITIONAL SODIUM TIMELINE & LIMITS

Age/grade group	Target 1: Effective July 1, 2022 (mg)
K–5	<540
6–8	<600
9–12	<640

The sodium limits apply to the average lunch and breakfast offered during the school week; they do not apply per day, per meal, or per menu item. This allows menu planners to occasionally offer higher sodium meals or menu items, if these meals or menu items are balanced out with lower sodium meals and menu items throughout school week.

These transitional standards align with FDA's recent voluntary sodium reduction targets for the food industry. The FDA's goal of supporting reductions in sodium intake is consistent with the *Dietary Guidelines for Americans, 2020–2025* and the *2019 National Academies of Sciences, Engineering, and Medicine Dietary Reference Intakes Report on Sodium and Potassium*.⁵⁴ FDA's guidance provides short-term (2.5 year) voluntary sodium reduction targets for food manufacturers, chain restaurants, and food service operators for 163 categories of processed, packaged, and prepared foods.⁵⁵ The targets in FDA's guidance, issued in October 2021, seek to support decreasing average U.S. population sodium intake from approximately 3,400 mg to 3,000 mg per day, about a 12 percent reduction. These reductions are anticipated to support a gradual sodium reduction strategy in

NSLP and SBP. While FDA is recommending the voluntary targets be met in 2.5 years (April 2024), in advance of that timeframe schools are anticipated to be able to procure additional options that are lower in sodium as the food industry continues reformulation efforts and develops new food products that align with FDA's voluntary targets. The gradual steps schools will take to lower sodium intake in the short term are important to further support reducing children's average sodium intake as recommended by the *Dietary Guidelines*. When issuing its guidance, FDA noted that modest sodium reductions can reduce the risk of diet-related diseases and improve health.⁵⁶

USDA considered FDA's sodium reduction guidance in the context of the school meal standards, which include dietary specifications for specific age/grade groups. USDA also relied on the *Dietary Guidelines, 2020–2025* and the 2009 National Academy of Medicine report, which informed the sodium targets in the 2012 rule. USDA also considered the timeframe for FDA's voluntary short-term sodium reduction targets, as noted above. When examining the daily sodium allocation attributed to each meal, USDA

determined that sodium reductions are most needed at lunch. Therefore, USDA is maintaining Sodium Target 1 for breakfast during the two-year timeframe of this transitional rule, which will allow schools to focus their sodium reduction efforts on school lunch. Noting some commenters' concerns with the palatability of lower sodium school meals and to establish feasible sodium reductions in school lunches, USDA set the near-term (Target 1A) reduction at 10 percent, which also aligns with research indicating gradual sodium reductions are less noticeable to consumers.⁵⁷

On average, under Sodium Target 1A, daily sodium amounts for school lunch will be reduced as follows:

- Grades K–5: 120 mg reduction (<1,230 mg to <1,110 mg)
- Grades 6–8: 135 mg reduction (<1,360 mg to <1,225 mg)
- Grades 9–12: 140 mg reduction (<1,420 mg to <1,280 mg)

A 10 percent sodium reduction for NSLP is a reasonable approach in the near-term given a variety of factors, including COVID–19 response and recovery, in school settings, school staffing challenges, and current product availability. It represents an achievable goal that supports gradual sodium reduction. A variety of factors, including implementation of FDA's voluntary reduction targets,

⁵⁴ U.S. Food and Drug Administration: *Sodium Reduction*. Available at: www.fda.gov/SodiumReduction.

⁵⁵ U.S. Food and Drug Administration: *Voluntary Sodium Reduction Goals: Target Mean and Upper Bound Concentrations for Sodium in Commercially Processed, Packaged, and Prepared Foods*. October 2021. Available at: www.fda.gov/SodiumReduction.

⁵⁶ U.S. Food and Drug Administration: *To Improve Nutrition and Reduce the Burden of Disease, FDA Issues Food Industry Guidance for Voluntarily Reducing Sodium in Processed and Packaged Foods*. Available at: <https://www.fda.gov/news-events/press-announcements/improve-nutrition-and-reduce-burden-disease-fda-issues-food-industry-guidance-voluntarily-reducing>.

⁵⁷ Institute of Medicine 2010. *Strategies to Reduce Sodium Intake in the United States*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/12818>.

developments in food science, and feedback from State and local stakeholders, will inform USDA's decisions regarding sodium moving forward. As lower sodium products become more widely available in the broader food market and children grow more accustomed to lower sodium foods, issues of palatability may not be as significant a factor in setting NSLP and SBP sodium standards.

Consistent with statutory requirements, USDA's intention is to ensure that the sodium targets for school meals reflect the goals of the current *Dietary Guidelines*, which recommend reducing average sodium intake from current levels. The *Dietary Guidelines* also suggest that small changes matter, and can significantly improve the overall nutritional profile of a meal.⁵⁸ USDA considered the sodium recommendations in the current *Dietary Guidelines* among other factors, such as the COVID-related operational and implementation challenges, and determined that the transitional standards in this rule will allow schools to gradually progress toward further sodium reduction in school meals. This approach reflects the sodium targets, which were achieved prior to the pandemic, and includes a moderate further reduction in the NSLP targets, consistent with FDA's guidance for the food industry.

USDA acknowledges that sodium targets must be achievable for most schools based on product availability, and must allow schools to plan appealing meals that encourage consumption and intake of key nutrients that are essential for children's growth and development. This final rule responds to school food professionals, who are concerned about their ability to procure foods that comply with Sodium Target 2 and the Final Sodium Target in the near-term. A 2021 survey of school nutrition directors found that 62 percent of respondents considered product or ingredient availability to be a significant challenge in meeting Sodium Target 2, and 75 percent considered it to be a significant challenge in meeting the Final Sodium Target. Respondents also expressed concern about sodium levels in specific foods and products. For example, when citing challenges in meeting Sodium Target 2, 55 percent of respondents described naturally occurring sodium in foods such as milk, low-fat cheese, and meat as a significant challenge, and 64 percent considered

sodium levels in condiments to be a significant challenge.⁵⁹ A USDA study found that 70 percent of SFAs planned to purchase lower sodium products in order to meet sodium standards, suggesting availability of products is an important factor in their ability to meet the standards.⁶⁰

Looking ahead, USDA recognizes the need for further sodium reduction. The changes in this final rule, which are intended as transitional standards, will encourage the re-introduction of lower sodium foods and meals to students, and give the food industry additional time to develop and test lower sodium products that are palatable to students. It will allow more time for school food professionals to engage in student taste tests, which help SFAs to make informed decisions regarding well-accepted food products. A USDA study found that obtaining feedback from students via taste testing was the most often-employed strategy for product selection and recipe refinement, according to SFAs.⁶¹ Further, about three-quarters of school food service directors reported that gaining student acceptance of the meal pattern standards was moderately to extremely challenging with respect to maintaining student participation; this makes additional time for recipe refinement important.⁶²

These transitional standards are especially needed after COVID-19 operations when many schools were offering grab-and-go meals that included processed, individually wrapped food products to ensure the safe distribution of food to children. Additionally, limited staffing, which made it harder to cook meals from scratch, likely contributed to increased sodium levels during SY 2020–2021 and SY 2021–2022 compared to just prior to the pandemic. A 2021 survey of school

nutrition directors found that 47 percent of respondents considered scratch cooking limitations (e.g., staffing, infrastructure, schedule) to be a significant challenge in working towards meeting Sodium Target 2, and 58 percent considered it to be a significant challenge in working towards meeting the Final Sodium Target. USDA recognizes that response and eventual recovery from the effects of the pandemic will take time; SFAs continue to face many challenges that impact the school meal service, including increased food costs, supply chain disruptions, labor shortages, and transportation issues.

USDA is committed to supporting long-term sodium reduction, which is consistent with the goals of the *Dietary Guidelines, 2020–2025* and Healthy People 2030⁶³ and critical to the healthy development of our Nation's children. As noted, this rule does not implement Sodium Target 2 or the Final Sodium Target for the near-term because this rule represents transitional standards which meaningfully move nutritional standards forward as part of an overall process—which will include further notice-and-comment rulemaking—to continually enhance nutritional security of the school meal programs. However, immediate implementation of significant sodium reduction could potentially lower student acceptance of school meals. Currently, students may be accustomed to eating higher-sodium foods outside of school, and potentially, higher-sodium school meals that may have been served during pandemic operations. Extending Sodium Target 1 and instituting Sodium Interim Target 1A for the NSLP is important for practical reasons. Setting a more practicable approach to sodium reduction allows more time for product reformulation, school menu adjustments, recipe development, personnel training, and changes in student preferences; as noted by comments, these factors are important to successful implementation of further sodium reduction in school meals.

The *Dietary Guidelines* note that taste preferences for salty foods may be established early in life, and that early food preferences can influence later food choices.⁶⁴ However, palates can

⁵⁹ School Nutrition Association. *Back to School 2021 Report: A Summary of Survey Results*. Available at: https://schoolnutrition.org/uploadedFiles/News_and_Publications/Press_Releases/Press_Releases/Back-to-School-Report-2021.pdf.

⁶⁰ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, *Child Nutrition Program Operations Study (CN-OPS-II): SY 2016–17*. Beyler, Nick, Jim Murdoch, and Charlotte Cabili. Project Officer: Holly Figueroa. Alexandria, VA: June 2021. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/CNOPS-II-SY2016-17.pdf>.

⁶¹ *Successful Approaches to Reduce Sodium in School Meals*. Available at: <https://fns-prod.azureedge.net/sites/default/files/resource-files/Approaches-ReduceSodium-Volume2.pdf>.

⁶² U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, *Child Nutrition Program Operations Study (CN-OPS-II): SY 2016–17*. Beyler, Nick, Jim Murdoch, and Charlotte Cabili. Project Officer: Holly Figueroa. Alexandria, VA: June 2021.

⁵⁸ U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2020–2025*. 9th Edition. December 2020. Available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

⁶³ U.S. Department of Health and Human Services. *Nutrition and Healthy Eating*. Available at: <https://health.gov/healthypeople/objectives-and-data/browse-objectives/nutrition-and-healthy-eating>.

⁶⁴ U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2020–2025*. 9th Edition. December 2020. Available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

also adjust to lower sodium foods.⁶⁵ Because the preference for salty foods is a learned preference, the transitional standards in this final rule provide additional time for the overall food marketplace and community public health messaging to take steps to also reduce sodium in the food supply, while encouraging moderate reductions in school lunches. Allowing sodium reduction in schools to be on pace with community sodium reduction strategies, and implementation of the FDA's voluntary short-term sodium reduction targets, will yield a higher likelihood of success. This approach also will allow the opportunity for input from key stakeholders on how sodium reduction in schools can be coordinated with a larger public health effort and with industry research and development, so that children's preference for sodium in foods can gradually change without noticeable changes to the palatability of school meals. In addition, this final rule will provide USDA with additional time to thoughtfully propose a new rule that offers a permanent, achievable reduction in sodium in school meals that continues to be consistent with the goals of the *Dietary Guidelines*.

USDA appreciates that, since 2012, schools have made significant progress in reducing the sodium content of meals. A study published in 2020⁶⁶ provides evidence that schools have the ability to provide lower sodium meals that are acceptable to students and do not increase food waste. The study also notes that 9 in 10 children in the United States consume sodium at levels that exceed *Dietary Guidelines* and National Academy of Medicine (formerly the Institute of Medicine) recommendations, and that 1 in 6 children have pre-high blood pressure or high blood pressure, putting them at risk for cardiovascular disease as adults. Because of these health risks, it is important for schools that have the ability to reduce the sodium content of meals to do so. Further, USDA

encourages families and communities to support schools' efforts by taking gradual steps to reduce the sodium content of meals offered to children outside of schools when possible. Wholesome school meals are only a part of children's daily food intake, and children will be more likely to eat them if the foods available to them outside of school are also lower in sodium. Helping students adjust their taste preferences requires collaboration between schools, parents and guardians, and communities.

USDA's Team Nutrition and the Institute of Child Nutrition have developed a range of resources and tools for reducing sodium; USDA will continue to provide schools with technical assistance, training resources, recipes, and mentoring to help them offer healthy, lower sodium meals. To support schools, USDA will engage public health organizations to collaborate on messages to educate families and communities about the need for sodium reduction in school meals. Further, USDA will gather feedback on how sodium reduction impacts schools' ability to offer foods from a variety of cultures and regions to avoid negatively impacting the diversity of school meal menus. In addition, USDA Foods will continue to provide food products with no added salt and/or low sodium content for inclusion in school meals. As noted previously, at the local level, 7 CFR 210.12(a) allows students, parents and guardians, and community members to influence menu planning; USDA encourages the school community to provide ideas on sodium reduction strategies. USDA also encourages schools to communicate the importance of reducing sodium in school meals, for example, by sharing nutrition education messages with students in the school cafeteria.

Accordingly, this final rule amends 7 CFR 210.10(f)(3) and 220.8(f) to maintain Sodium Target 1 for NSLP and SBP through SY 2022–2023, as well as for SBP in SY 2023–2024, and

implement Sodium Target 1A for NSLP no later than SY 2023–2024. USDA invites public comments on the USDA sodium standards discussed in this final rule, including comments about how USDA can support implementation of those sodium standards. These public comments will help to inform USDA's future rulemaking.

IV. Good Cause

While USDA has extensively considered public comments on this final rule, USDA would have good cause to issue this rule even without soliciting public comment.

USDA believes that good cause exists to implement these transitional standards as an interim final rule due to the immediate need of school operators to begin procurement activities for school meal programs. Since March 2020, USDA and Child Nutrition Program operators have worked tirelessly to ensure children's access to nutritious meals throughout the pandemic, safe reopening of schools, and steps towards resumption of traditional meal service. Most resources have been devoted to such efforts and as explained above, the 2012 standards were not applicable during such period due to COVID-related flexibilities granted by Congress. However, Congress recently revised such flexibilities to end after SY 2021–2022. *See* Section 3102(a) of the Extending Government Funding and Delivering Emergency Assistance Act (Pub. L. 117–43) (amending Section 2202(e) of the Families First Coronavirus Response Act).

In addition, many SFAs plan school menus months in advance of the new school year. For SFAs to make menu planning, procurement, and contract decisions in advance of the school year, they need advance notice of the meal pattern requirements. As shown in the chart below, due to the numerous steps involved, the ICN estimates that the entire procurement process may take up to a year to complete.

PROCUREMENT TIMELINE FOR SCHOOL FOOD SERVICE OPERATORS

Month(s)	Task(s)
August–September	<ul style="list-style-type: none"> • Begin preparing for procuring items. Planning approximately one year in advance provides sufficient time for preparation for all parties in the food chain.
October–December	<ul style="list-style-type: none"> • Write specifications. • Project USDA Foods needs. • Fall and winter breaks may impact timeline.

⁶⁵ IOM (Institute of Medicine). *Strategies to Reduce Sodium Intake in the United States*. Washington, DC: The National Academies Press; 2010.

⁶⁶ Juliana F.W. Cohen, Scott Richardson, Christina A. Roberto, Eric B. Rimm, *Availability of Lower-Sodium School Lunches and the Association with Selection and Consumption among Elementary*

and Middle School Students, Journal of the Academy of Nutrition and Dietetics, 2020. Available at: <http://www.sciencedirect.com/science/article/pii/S2212267220309710>.

PROCUREMENT TIMELINE FOR SCHOOL FOOD SERVICE OPERATORS—Continued

Month(s)	Task(s)
January	<ul style="list-style-type: none"> • Develop solicitation document. Include pertinent information about the district; date and time for pre-solicitation conference and solicitation submission; scope of work; time period for the solicitation; any common legalities; ability for price escalations; name brand items; substitutions; discounts, rebates, and applicable credits; communication instructions with the district prior to the closing date; solicitation evaluation criteria. • Plan accordingly to have solicitation document and agenda item at school board meeting. • Modify proposal based on legal counsel's directives. Remember fall and winter breaks may impact the timeline.
February–March	<ul style="list-style-type: none"> • Propose solicitation document to school board. • Follow internal procedures. • Communicate to distributors and manufacturer and publicly announce the solicitation. • Publicize the solicitation document. • Conduct the solicitation meeting. • Allow a minimum of four weeks for vendors to respond. • Evaluate solicitations based on pre-established criteria and select vendors.
April–May	<ul style="list-style-type: none"> • Receive School Board approval for the selection of vendor. • Provide information to distributor and/or manufacturer. • Allow longer time for specialty items and name brand items.
June	<ul style="list-style-type: none"> • Communicate with stakeholders, determine delivery dates, and discuss school opening logistics.
July–August	<ul style="list-style-type: none"> • Receive products for upcoming school year.

Planning and acting in advance saves time, helps avoid repetitive tasks, and implements cost-effective inventory management, according to the ICN. Once menu planning is complete, schools need lead time to screen products, forecast required food quantities, write product specifications, create solicitation documents, announce the solicitation, and award the contract for the next school year. This final rule is necessary and timely, because for schools to successfully plan and adequately prepare for SY 2022–2023, they need to know the meal pattern requirements immediately. Planning and preparing for the new school year is important not only from an administrative standpoint; it also allows school nutrition professionals to better serve the children who rely on school breakfast and lunch for up to half their dietary intake each school day.⁶⁷ Supporting schools' ability to plan ahead is especially important at a time when schools are still facing pandemic-related concerns, such as supply chain disruptions, staff shortages, and financial losses.⁶⁸ Importantly, if schools do not have sufficient time to procure foods that comply with the

meal pattern standards, they may choose not to participate in the programs or, if they do participate, may be found noncompliant and, depending on the meal pattern violation, ineligible for reimbursement.

V. Summary

In 2012, USDA published a final rule that raised school meal nutrition standards for the first time in more than 15 years. The updated meal patterns were a key component of implementing the Healthy, Hunger-Free Kids Act, which significantly enhanced school meal standards to meet the nutritional needs of children and to safeguard their health and well-being. Most elements of the 2012 regulations have been successfully implemented with measurable, positive effect.⁶⁹ Under the updated standards, USDA research found that school lunches were more nutritious compared to lunches from home or other places. For example, students who ate school lunches were more than twice as likely to consume vegetables at lunch compared to students who ate lunches from home or

other sources.⁷⁰ USDA also found that a majority of SFA directors agreed that the updated standards were helpful in decreasing sodium, increasing dark green and red/orange vegetables, meeting calorie requirements, and increasing whole grains in school meals.⁷¹

Yet, for several years after publication of the 2012 rule, administrative and legislative action provided flexibility to the milk, whole grains, and sodium requirements. In 2018, USDA published a final rule to revise the requirements for milk, whole grains, and sodium. In April 2020, due to a court decision vacating the 2018 rule, the meal pattern requirements for milk, whole grains, and sodium immediately reverted to the 2012 regulations.

Nevertheless, nationwide meal pattern waivers provided flexibility to allow safe meal service during the COVID–19 pandemic, so the court decision had little practical effect on schools at the time. These waivers will expire on June 30, 2022. However, many schools are not ready to immediately serve meals that meet the milk, whole grains, and sodium requirements from the 2012 rule. Reverting to these requirements, some of which have never been fully in effect, immediately after the waivers expire would be unrealistic and impose unreasonable difficulties on

⁶⁷ Karen Weber Cullen, Tzu-An Chen, *The contribution of the USDA school breakfast and lunch program meals to student daily dietary intake*, Preventive Medicine Reports. March 2017. Available at: <https://www.sciencedirect.com/science/article/pii/S2211335516301516>.

⁶⁸ School Nutrition Association. *Back to School 2021 Report: A Summary of Survey Results*. Available at: https://schoolnutrition.org/uploadedFiles/News_and_Publications/Press_Releases/Press_Releases/Back-to-School-Report-2021.pdf. Continued pandemic-related supply chain disruptions, staff, shortages, and financial sustainability/losses were identified as the top three “serious concerns” among survey respondents.

⁶⁹ School Nutrition and Meal Cost Study findings suggest that the updated nutrition standards have had a positive and significant influence on the nutritional quality of school meals. Between SY 2009–2010 and SY 2014–2015, “Healthy Eating Index-2010” (HEI) scores for NSLP and SBP increased significantly, suggesting that the updated standards significantly improved the nutritional quality of school meals. Over this period, the mean HEI score for NSLP lunches increased from 57.9 to 81.5, and the mean HEI score for SBP breakfasts increased from 49.6 to 71.3. The study is available at: <https://www.fns.usda.gov/school-nutrition-and-meal-cost-study>. School Nutrition and Meal Cost Study (OMB Control Number 0584–0596, expiration date 07/31/2017.)

⁷⁰ *Lunches Consumed From School Are the Most Nutritious*. Available at: https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS_infographic5_SchoolLunchesAretheMostNutritious.pdf.

⁷¹ *Updated Nutrition Standards Posed Challenges but Achieved Underlying Goals*. Available at: https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS_infographic1_ChallengeswithNutritionStandards.pdf.

schools, undermining their ability to comply with Program requirements. Additionally, schools need more time to respond to and recover from the economic and transformational impacts of meal service during the pandemic.

Considering the comments received on the November 2020 proposed rule, circumstances affecting schools, and the current *Dietary Guidelines*, USDA is finalizing the November 2020 proposed rule with standards targeting three meal requirements for the near-term, which will provide schools with a measured transition to healthier meals. The transitional standards offered in this final rule apply only to the milk, whole grains, and sodium requirements. This final rule will allow NSLP and SBP operators, and some CACFP and SMP operators, to offer flavored, low-fat milk; require at least 80 percent of the weekly grains in the school lunch and breakfast menus to be whole grain-rich; and retain Sodium Target 1 for NSLP and SBP through the end of SY 2022–2023, as well as for SBP beginning in SY 2023–2024, and make a Sodium Interim Target 1A effective for NSLP beginning in SY 2023–2024.

Schools that can meet or exceed these standards do not have to change their menus because of this final rule, and are encouraged to continue exceeding the regulatory standard to provide students with the healthiest meals possible. At the local level, 7 CFR 210.12(a) allows students, parents and guardians, and community members to influence menu planning. The local school wellness policy (7 CFR 210.31) also provides an important opportunity to influence the school nutrition environment at large; USDA encourages community members to support their local school's efforts to provide students with nutritious school meals. In addition, 7 CFR 210.19(e) allows State agencies discretion to set additional requirements that are not inconsistent with the minimum nutrition standards for school meals.

Looking ahead, USDA will promulgate a new rulemaking regarding nutritional requirements for school meals that comprehensively considers the goals of the *Dietary Guidelines, 2020–2025*, recent nutrition science, and the needs of children who may experience food and nutrition insecurity. USDA also commits to providing stakeholders with a meaningful opportunity to offer comments on a new proposed rule and will fully consider all comments. USDA intends to propose and finalize a new rule that demonstrates the Department's commitment to nutrition to be effective by SY 2024–2025.

Meanwhile, USDA will continue to provide schools with technical assistance, training resources, and mentoring to help them offer nutritious meals that students enjoy. In addition, USDA Foods will continue to provide whole grain-rich products and products with no added salt and/or low sodium content for inclusion in school meals. USDA invites the public to comment on the content of this final rule, as well as provide comments that will inform the future rulemaking that will offer the next steps towards better nutrition for America's school children.

Procedural Matters

Executive Order 12866 and 13563

Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This final rule has been determined to be economically significant and was reviewed by the Office of Management and Budget (OMB) in conformance with Executive Order 12866.

Regulatory Impact Analysis

As required for all rules that have been designated as Significant by the Office of Management and Budget, a Regulatory Impact Analysis (RIA) was developed for this final rule. It follows this rule as an Appendix. The following summarizes the conclusions of the regulatory impact analysis:

Need for Action: This final rule will establish transitional standards to support the continued provision of nutritious school meals while USDA updates the meal pattern standards to reflect the *Dietary Guidelines for Americans, 2020–2025*, and as schools recover from the pandemic. USDA will develop updated standards through a new rulemaking for implementation in school year (SY) 2024–2025 and beyond, based on current nutrition science and public input on how to build on the success of school meals in supporting healthy eating and improved dietary outcomes. The COVID–19 pandemic impacted the entire Nation, but schools faced challenges adjusting to widespread closures, online and hybrid learning, and supply chain issues that affected the school meal

service and the broader school environment. Many operators will need to reacquaint themselves with the 2012 standards after several years of Congressional, regulatory, and administrative interventions, followed by two years of meal pattern flexibilities provided in response to the public health emergency. As a result of these interventions and COVID–19 nationwide waivers, the 2012 whole grain-rich requirement and Sodium Target 2 have not been fully implemented, and the 2012 milk requirements have not been fully implemented in over five years. This final rule establishes transitional requirements for milk whole grains, and sodium to respond to the needs of schools as they recover from the challenges of COVID–19, while also taking measured steps towards improving nutritional quality of meals offered.

Benefits: This rule builds on the major achievements schools have already made improving school meals to support healthy diets for school children. Schools would face extreme challenges immediately returning to the 2012 standards from COVID–19 operations, which would be compounded by supply chain disruptions and staffing concerns. This rule will implement a modified Sodium Target 1A for NSLP, which will support schools with a gradual transition to lower sodium meals. USDA also increased the percentage of whole grain-rich offerings required from 50 percent in the proposed rule to 80 percent in this final rule to recognize the need to continued progress in school meal nutrition. This rule provides achievable standards while USDA engages in more comprehensive long-term rulemaking to further update the meal standards.

Costs: USDA estimates this final rule will save schools \$0.15 cent per meal or \$1.1 billion annually compared to directly moving to the 2012 standards for milk, whole grains, and sodium in SY 2022–2023. Absent this rule it is estimated to cost \$1.3 billion annually or \$0.18 per meal for schools to move immediately to the 2012 milk, whole grains, and sodium requirements. The increased costs to schools under the 2012 standards are primarily due to the requirement to procure entirely whole grain-rich offerings, which are estimated to be more expensive than enriched items, and the stricter sodium standards, which require additional food and labor costs to support scratch cooking as industry currently does not offer enough compliant products. Relative to current school year operations, this rule is estimated to

potentially increase costs to schools by \$187 million annually or about \$0.03 per meal. These are mostly driven by the move to the requirement that at least 80 percent of grains offered must be whole grain-rich and increases in food and labor costs for schools that still need to meet Sodium Target 1 and Target 1A. Costs to offer low-fat, flavored milk as an option are due to low-fat, flavored milk being slightly more expensive than fat-free, flavored varieties.

Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601–612) requires agencies to analyze the impact of rulemaking on small entities and consider alternatives that would minimize any significant impacts on a substantial number of small entities. Pursuant to that review, it has been certified that this rule would not have a significant impact on a substantial number of small entities. Because this interim final rule adds flexibility to current Child Nutrition Program regulations, the changes implemented through this final rule are expected to benefit small entities operating meal programs under 7 CFR parts 210, 215, 220, and 226.

Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), the Office of Information and Regulatory Affairs designated this rule as a major rule, as defined by 5 U.S.C. 804(2).

Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local and tribal governments, and the private sector. Under section 202 of the UMRA, the Department generally must prepare a written statement, including a cost benefit analysis, for proposed and final rules with “Federal mandates” that may result in expenditures by State, local or tribal governments, in the aggregate, or the private sector, of \$146 million or more (when adjusted for inflation; GDP deflator source: Table 1.1.9 at <http://www.bea.gov/iTable>) in any one year. When such a statement is needed for a rule, Section 205 of the UMRA generally requires the Department to identify and consider a reasonable number of regulatory alternatives and adopt the most cost effective or least burdensome alternative that achieves the objectives of the rule.

This final rule does not contain Federal mandates (under the regulatory provisions of Title II of the UMRA) for

State, local and Tribal governments, or the private sector of \$146 million or more in any one year. Thus, the rule is not subject to the requirements of sections 202 and 205 of the UMRA.

Executive Order 12372

The NSLP, SMP, SBP, and the CACFP are listed in the Catalog of Federal Domestic Assistance under NSLP No. 10.555, SMP No. 10.556, SBP No. 10.553, and CACFP No. 10.558, respectively, and are subject to Executive Order 12372, which requires intergovernmental consultation with State and local officials (see 2 CFR chapter IV). Since the Child Nutrition Programs are State-administered, USDA’s FNS Regional Offices have formal and informal discussions with State and local officials, including representatives of Indian Tribal Organizations, on an ongoing basis regarding program requirements and operations. This provides USDA with the opportunity to receive regular input from program administrators and contributes to the development of feasible program requirements.

Federalism Summary Impact Statement

Executive Order 13132 requires Federal agencies to consider the impact of their regulatory actions on State and local governments. Where such actions have federalism implications, agencies are directed to provide a statement for inclusion in the preamble to the regulations describing the agency’s considerations in terms of the three categories called for under Section (6)(b)(2)(B) of Executive Order 13132. The Department has considered the impact of this final rule on State and local governments and has determined that this rule does not have federalism implications. Therefore, under section 6(b) of the Executive Order, a federalism summary is not required.

Executive Order 12988, Civil Justice Reform

This final rule has been reviewed under Executive Order 12988, Civil Justice Reform. This rule is intended to have preemptive effect with respect to any State or local laws, regulations, or policies which conflict with its provisions or which would otherwise impede its full and timely implementation. This rule is not intended to have retroactive effect. Prior to any judicial challenge to the provisions of the interim final rule, all applicable administrative procedures must be exhausted.

Civil Rights Impact Analysis

FNS has reviewed the final rule, in accordance with Department Regulation 4300–004, Civil Rights Impact Analysis, to identify and address any major civil rights impacts the final rule might have on minorities, women, and persons with disabilities. A comprehensive Civil Rights Impact Analysis (CRIA) was conducted on the final rule, including an analysis of participant data and provisions contained in the final rule. The CRIA outlines outreach and mitigation strategies to lessen any possible civil rights impacts. The CRIA concludes by stating that FNS believes the promulgation of this final rule will impact SFAs and CACFP institutions and facilities by adding transitional meal pattern standards. Additionally, participants in the NSLP, SBP, SMP, and CACFP may be impacted if transitional meal pattern standards are taken by SFAs and CACFP institutions and facilities. However, FNS finds that the implementation of mitigation strategies and monitoring by the FNS Civil Rights Division and FNS Child Nutrition Programs may lessen these impacts. If deemed necessary, the FNS Civil Rights Division will propose further mitigation and outreach to alleviate impacts that may result from the implementation of the final rule.

Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175 requires Federal agencies to consult and coordinate with Tribes on a government-to-government basis on policies that have Tribal implications, including regulations, legislative comments, or proposed legislation. Additionally, other policy statements or actions that have substantial direct effects on one or more Indian Tribes, the relationship between the Federal Government and Indian Tribes, or on the distribution of power and responsibilities between the Federal Government and Indian Tribes also require consultation.

After reviewing the final rule, the Office of Tribal Relations (OTR) has determined that there are multiple issues that could warrant tribal consultation such as the milk requirement and not allowing flexibility for complete exclusion of dairy (not just lactose-free dairy) products and inclusion of completely different traditional sources of calcium, and the grain requirement not having flexibility for having certain indigenous foods for carbohydrates that are not grains (such as wild rice, amaranth, etc.).

Recognizing that there have been difficulties associated with the COVID-19 pandemic and because these are transitional standards, OTR approves the final rule on the condition that there is robust consultation on the forthcoming proposed rule related to school nutrition standards to ensure that indigenous views and dietary concerns are fully taken into account.

If a tribe requests consultation in the future, FNS will work with the Office of Tribal Relations to ensure meaningful consultation is provided.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. Chap. 35; 5 CFR part 1320) requires the Office of Management and Budget (OMB) to approve all collections of information by a Federal agency before they can be implemented. Respondents are not required to respond to any collection of information unless it displays a current valid OMB control number.

Send comments to the Office of Information and Regulatory Affairs, OMB, Attention: Desk Officer for FNS, Washington, DC 20503. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on those who are to respond, including use of appropriate automated, electronic, mechanical, or other

technological collection techniques or other forms of information technology. All responses to this notice will be summarized and included in the request for OMB approval. All comments will also become a matter of public record.

This rule contains information collections that have been approved by OMB under OMB #0584-0006 (7 CFR part 210, National School Lunch Program), expires 7/31/2023; OMB #0584-0012 (7 CFR part 220, School Breakfast Program), expires 4/30/2022; OMB #0584-0005 (7 CFR part 215, Special Milk Program for Children), expires 7/31/2022; and OMB #0584-0055 (7 CFR part 226, Child and Adult Care Food Program), expired 2/29/2020. Although the CACFP information collection has expired, USDA is planning to reinstate it and has published a 60-Day Notice. Revisions are underway and USDA expects to submit it to OMB for review soon. The provisions of this rule do not impose new or existing information collection requirements subject to approval by the OMB under the Paperwork Reduction Act of 1994.

E-Government Act Compliance

The Department is committed to complying with the E-Government Act of 2002, to promote the use of the internet and other information technologies to provide increased opportunities for citizen access to Government information and services, and for other purposes.

List of Subjects

7 CFR Part 210

Grant programs—education, Grant programs—health, Infants and children, Nutrition, Penalties, Reporting and recordkeeping requirements, School

breakfast and lunch programs, Surplus agricultural commodities.

7 CFR Part 215

Food assistance programs, Grant programs—education, Grant program—health, Infants and children, Milk, Reporting and recordkeeping requirements.

7 CFR Part 220

Grant programs—education, Grant programs—health, Infants and children, Nutrition, Reporting and recordkeeping requirements, School breakfast and lunch programs.

7 CFR Part 226

Accounting, Aged, Day care, Food assistance programs, Grant programs, Grant programs—health, Individuals with disabilities, Infants and children, Intergovernmental relations, Loan programs, Reporting and recordkeeping requirements, Surplus agricultural commodities.

Accordingly, 7 CFR parts 210, 215, 220, and 226 are amended as follows:

PART 210—NATIONAL SCHOOL LUNCH PROGRAM

■ 1. The authority citation for 7 CFR part 210 continues to read as follows:

Authority: 42 U.S.C. 1751–1760, 1779.

■ 2. In § 210.10:

■ a. Revise the table in paragraph (c) introductory text; and

■ b. Revise paragraphs (c)(2)(iv)(B), (d)(1)(i), and (f)(3).

The revisions read as follows:

§ 210.10 Meal requirements for lunches and requirements for afterschool snacks.

* * * * *

(c) * * *

TABLE 1 TO PARAGRAPH (c) INTRODUCTORY TEXT—LUNCH MEAL PATTERN

	Grades K–5	Grades 6–8	Grades 9–12
Food components	Amount of Food ^a per Week		
	(minimum per day)		
Fruits (cups) ^b	2½ (½)	2½ (½)	5 (1)
Vegetables (cups) ^b	3¾ (¾)	3¾ (¾)	5 (1)
Dark green ^c	½	½	½
Red/Orange ^c	¾	¾	1¼
Beans and peas (legumes) ^c	½	½	½
Starchy ^c	½	½	½
Other ^{c,d}	½	½	¾
Additional Vegetables to Reach Total ^e	1	1	1½
Grains (oz eq) ^f	8–9 (1)	8–10 (1)	10–12 (2)
Meats/Meat Alternates (oz eq)	8–10 (1)	9–10 (1)	10–12 (2)
Fluid milk (cups) ^g	5 (1)	5 (1)	5 (1)
Other Specifications: Daily Amount Based on the Average for a 5-Day Week			
Min-max calories (kcal) ^h	550–650	600–700	750–850
Saturated fat (% of total calories) ^h	<10	<10	<10

TABLE 1 TO PARAGRAPH (c) INTRODUCTORY TEXT—LUNCH MEAL PATTERN—Continued

	Grades K–5	Grades 6–8	Grades 9–12
	(minimum per day)		
Sodium Interim Target 1 (mg) ^h	≤1,230	≤1,360	≤1,420
Sodium Interim Target 1A (mg) ^{hi}	≤1,110	≤1,225	≤1,280
<i>Trans</i> fat ^h	Nutrition label or manufacturer specifications must indicate zero grams of <i>trans</i> fat per serving.		

^a Food items included in each group and subgroup and amount equivalents. Minimum creditable serving is 1/8 cup.

^b One-quarter cup of dried fruit counts as 1/2 cup of fruit; 1 cup of leafy greens counts as 1/2 cup of vegetables. No more than half of the fruit or vegetable offerings may be in the form of juice. All juice must be 100% full-strength.

^c Larger amounts of these vegetables may be served.

^d This category consists of “Other vegetables” as defined in paragraph (c)(2)(iii)(E) of this section. For the purposes of the NSLP, the “Other vegetables” requirement may be met with any additional amounts from the dark green, red/orange, and beans/peas (legumes) vegetable subgroups as defined in paragraph (c)(2)(iii) of this section.

^e Any vegetable subgroup may be offered to meet the total weekly vegetable requirement.

^f At least 80 percent of grains offered weekly must meet the whole grain-rich criteria specified in FNS guidance, and the remaining grain items offered must be enriched.

^g All fluid milk must be fat-free (skim) or low-fat (1 percent fat or less). Milk may be flavored or flavored, provided that unflavored milk is offered at each meal service.

^h Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, *trans* fat, and sodium. Foods of minimal nutritional value and fluid milk with fat content greater than 1 percent are not allowed.

ⁱ Sodium Interim Target 1A must be met no later than July 1, 2023 (SY 2023–2024).

* * * * *

(2) * * *

(iv) * * *

(B) *Daily and weekly servings.* The grains component is based on minimum daily servings plus total servings over a 5-day school week. Schools serving lunch 6 or 7 days per week must increase the weekly grains quantity by approximately 20 percent (1/5) for each additional day. When schools operate less than 5 days per week, they may decrease the weekly quantity by approximately 20 percent (1/5) for each

day less than 5. The servings for biscuits, rolls, muffins, and other grain/bread varieties are specified in FNS guidance. Eighty (80) percent of grains offered weekly must meet the whole grain-rich criteria specified in FNS guidance, and the remaining grain items offered must be enriched.

* * * * *

(d) * * *

(1) * * *

(i) Schools must offer students a variety (at least two different options) of fluid milk. All milk must be fat-free

(skim) or low-fat (1 percent fat or less). Milk with higher fat content is not allowed. Low-fat or fat-free lactose-free and reduced-lactose fluid milk may also be offered. Milk may be unflavored or flavored, provided that unflavored milk is offered at each meal service.

* * * * *

(f) * * *

(3) *Sodium.* School lunches offered to each age/grade group must meet, on average over the school week, the levels of sodium specified in the following table within the established deadlines:

TABLE 4 TO PARAGRAPH (f)(3)—NATIONAL SCHOOL LUNCH PROGRAM SODIUM TIMELINE & LIMITS

Age/grade group	Target 1: effective July 1, 2022 (mg)	Interim target 1A: effective July 1, 2023 (mg)
K–5	≤1,230	≤1,110
6–8	≤1,360	≤1,225
9–12	≤1,420	≤1,280

* * * * *

§ 210.11 [Amended]

■ 3. In § 210.11, in paragraphs (m)(1)(ii), (m)(2)(ii), and (m)(3)(ii) add the words “flavored or” before the word “unflavored”.

PART 215—SPECIAL MILK PROGRAM FOR CHILDREN

■ 4. The authority for part 215 continues to read as follows:

Authority: 42 U.S.C. 1772 and 1779.

■ 5. In § 215.7a, revise paragraphs (a) introductory text and (a)(3) to read as follows:

§ 215.7a Fluid milk and non-dairy milk substitute requirements.

* * * * *

(a) *Types of fluid milk.* All fluid milk served in the Program must be pasteurized fluid milk which meets State and local standards for such milk, have vitamins A and D at levels specified by the Food and Drug Administration, and must be consistent with State and local standards for such milk. Lactose-free and reduced-lactose milk that meet the fat content and flavor specifications for each age group may also be offered. Fluid milk must also meet the following requirements:

* * * * *

(3) *Children 6 years old and older.* Children 6 years old and older must be served low-fat (1 percent fat or less) or fat-free (skim) milk. Milk may be flavored or unflavored.

* * * * *

PART 220—SCHOOL BREAKFAST PROGRAM

■ 6. The authority citation for part 220 continues to read as follows:

Authority: 42 U.S.C. 1773, 1779, unless otherwise noted.

■ 7. In § 220.8, revise the table in paragraph (c) introductory text and revise paragraphs (c)(2)(iv)(B), (d), and (f)(3) to read as follows:

§ 220.8 Meal requirements for breakfasts.

(c) * * *

* * * * *

TABLE 1 TO PARAGRAPH (c) INTRODUCTORY TEXT—BREAKFAST MEAL PATTERN

	Grades K–5	Grades 6–8	Grades 9–12
Food components	Amount of Food ^a per Week		
	(minimum per day)		
Fruits (cups) ^{b,c}	5 (1)	5 (1)	5 (1)
Vegetables (cups) ^{b,c}	0	0	0
Dark green	0	0	0
Red/Orange	0	0	0
Beans and peas (legumes)	0	0	0
Starchy	0	0	0
Other	0	0	0
Grains (oz eq) ^d	7–10 (1)	8–10 (1)	9–10 (1)
Meats/Meat Alternates (oz eq) ^e	0	0	0
Fluid milk ^f (cups)	5 (1)	5 (1)	5 (1)
Other Specifications: Daily Amount Based on the Average for a 5-Day Week			
Min-max calories (kcal) ^{g,h}	350–500	400–550	450–600
Saturated fat (% of total calories) ^h	<10	<10	<10
Sodium Target 1 (mg)	≤540	≤600	≤640
Trans fat ^h	Nutrition label or manufacturer specifications must indicate zero grams of <i>trans</i> fat per serving.		

^a Food items included in each group and subgroup and amount equivalents. Minimum creditable serving is 1/8 cup.^b One-quarter cup of dried fruit counts as 1/2 cup of fruit; 1 cup of leafy greens counts as 1/2 cup of vegetables. No more than half of the fruit or vegetable offerings may be in the form of juice. All juice must be 100% full-strength.^c Schools must offer 1 cup of fruit daily and 5 cups of fruit weekly. Vegetables may be substituted for fruits, but the first two cups per week of any such substitution must be from the dark green, red/orange, beans/peas (legumes), or “Other vegetables” subgroups, as defined in § 210.10(c)(2)(iii) of this chapter.^d At least 80 percent of grains offered weekly must meet the whole grain-rich criteria specified in FNS guidance, and the remaining grain items offered must be enriched. Schools may substitute 1 oz. eq. of meat/meat alternate for 1 oz. eq. of grains after the minimum daily grains requirement is met.^e There is no meat/meat alternate requirement.^f All fluid milk must be fat-free (skim) or low-fat (1 percent fat or less). Milk may be unflavored or flavored, provided that unflavored milk is offered at each meal service.^g The average daily calories for a 5-day school week must be within the range (at least the minimum and no more than the maximum values).^h Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, *trans* fat, and sodium. Foods of minimal nutritional value and fluid milk with fat content greater than 1 percent milk fat are not allowed.

* * * * *

(2) * * *

(iv) * * *

(B) *Daily and weekly servings.* The grains component is based on minimum daily servings plus total servings over a 5-day school week. Schools serving breakfast 6 or 7 days per week must increase the weekly grains quantity by approximately 20 percent (1/5) for each additional day. When schools operate less than 5 days per week, they may decrease the weekly quantity by approximately 20 percent (1/5) for each day less than 5. The servings for biscuits, rolls, muffins, and other grain/bread varieties are specified in FNS guidance. At least 80 percent of grains offered weekly must meet the whole grain-rich criteria specified in FNS guidance, and the remaining grain items offered must be enriched.

* * * * *

(d) *Fluid milk requirement.* Breakfast must include a serving of fluid milk as a beverage or on cereal or used in part for each purpose. Schools must offer

students a variety (at least two different options) of fluid milk. All fluid milk must be fat-free (skim) or low-fat (1 percent fat or less). Milk with higher fat content is not allowed. Low-fat or fat-free lactose-free and reduced-lactose fluid milk may also be offered. Milk may be flavored or unflavored, provided that unflavored milk is offered at each meal service. Schools must also comply with other applicable fluid milk requirements in § 210.10(d) of this chapter.

* * * * *

(f) * * *

(3) *Sodium.* School breakfasts offered to each age/grade group must meet, on average over the school week, the levels of sodium specified in the following table:

TABLE 3 TO PARAGRAPH (f)(3)—SCHOOL BREAKFAST PROGRAM SODIUM LIMITS

Age/grade group	Target 1 (mg)
K–5	≤540
6–8	≤600
9–12	≤640

* * * * *

PART 226—CHILD AND ADULT CARE FOOD PROGRAM

■ 8. The authority citation for part 226 continues to read as follows:

Authority: Secs. 9, 11, 14, 16, and 17, Richard B. Russell National School Lunch Act, as amended (42 U.S.C. 1758, 1759a, 1762a, 1765 and 1766).

■ 9. In § 226.20, revise paragraph (a)(1) and the tables to paragraphs (c)(1) through (3) to read as follows:

§ 226.20 Requirements for meals.

(a) * * *

(1) *Fluid milk*. Fluid milk must be served as a beverage or on cereal, or a combination of both. Lactose-free and reduced-lactose milk that meet the fat content and flavor specifications for each age group may also be offered.

(i) *Children 1 year old*. Unflavored whole milk must be served.

(ii) *Children 2 through 5 years old*. Either unflavored low-fat (1 percent) or

unflavored fat-free (skim) milk must be served.

(iii) *Children 6 years old and older*. Low-fat (1 percent fat or less) or fat-free (skim) milk must be served. Milk may be unflavored or flavored.

(iv) *Adults*. Low-fat (1 percent fat or less) or fat-free (skim) milk must be served. Milk may be unflavored or flavored. Six ounces (weight) or $\frac{3}{4}$ cup

(volume) of yogurt may be used to fulfill the equivalent of 8 ounces of fluid milk once per day. Yogurt may be counted as either a fluid milk substitute or as a meat alternate, but not as both in the same meal.

* * * * *

(c) * * *

(1) * * *

TABLE 2 TO PARAGRAPH (c)(1)—CHILD AND ADULT CARE FOOD PROGRAM BREAKFAST

[Select the appropriate components for a reimbursable meal]

Food components and food items ¹	Minimum quantities				
	Ages 1–2	Ages 3–5	Ages 6–12	Ages 13–18 ² (at-risk afterschool programs and emergency shelters)	Adult participants
Fluid Milk ³	4 fluid ounces	6 fluid ounces	8 fluid ounces	8 fluid ounces	8 fluid ounces.
Vegetables, fruits, or portions of both ⁴	$\frac{1}{4}$ cup	$\frac{1}{2}$ cup	$\frac{1}{2}$ cup	$\frac{1}{2}$ cup	$\frac{1}{2}$ cup.
Grains (oz. eq.) ^{5 6 7 8}	$\frac{1}{2}$ ounce equivalent	$\frac{1}{2}$ ounce equivalent	1 ounce equivalent ..	1 ounce equivalent ..	2 ounce equivalents.

Endnotes:

¹ Must serve all three components for a reimbursable meal. Offer versus serve is an option for at-risk afterschool participants.

² Larger portion sizes than specified may need to be served to children 13 through 18 years old to meet their nutritional needs.

³ Must be unflavored whole milk for children age one. Must be unflavored low-fat (1 percent fat or less) or unflavored fat-free (skim) milk for children two through five years old. Must be unflavored or flavored fat-free (skim) or low-fat (1 percent fat or less) milk for children 6 years old and older and adults. For adult participants, 6 ounces (weight) or $\frac{3}{4}$ cup (volume) of yogurt may be used to meet the equivalent of 8 ounces of fluid milk once per day when yogurt is not served as a meat alternate in the same meal.

⁴ Pasteurized full-strength juice may only be used to meet the vegetable or fruit requirement at one meal, including snack, per day.

⁵ At least one serving per day, across all eating occasions, must be whole grain-rich. Grain-based desserts do not count towards meeting the grains requirement.

⁶ Meat and meat alternates may be used to meet the entire grains requirement a maximum of three times a week. One ounce of meat and meat alternates is equal to one ounce equivalent of grains.

⁷ Refer to FNS guidance for additional information on crediting different types of grains.

⁸ Breakfast cereals must contain no more than 6 grams of sugar per dry ounce (no more than 21.2 grams sucrose and other sugars per 100 grams of dry cereal).

(2) * * *

TABLE 3 TO PARAGRAPH (c)(2)—CHILD AND ADULT CARE FOOD PROGRAM LUNCH AND SUPPER

[Select the appropriate components for a reimbursable meal]

Food components and food items ¹	Minimum quantities				
	Ages 1–2	Ages 3–5	Ages 6–12	Ages 13–18 ² (at-risk afterschool programs and emergency shelters)	Adult participants
Fluid Milk ³	4 fluid ounces	6 fluid ounces	8 fluid ounces	8 fluid ounces	8 fluid ounces. ⁴
Meat/meat alternates (edible portion as served):					
Lean meat, poultry, or fish	1 ounce	1½ ounces	2 ounces	2 ounces	2 ounces.
Tofu, soy products, or alternate protein products ⁵	1 ounce	1½ ounces	2 ounces	2 ounces	2 ounces.
Cheese	1 ounce	1½ ounces	2 ounces	2 ounces	2 ounces.
Large egg	$\frac{1}{2}$	$\frac{3}{4}$	1	1	1.
Cooked dry beans or peas	$\frac{1}{4}$ cup	$\frac{3}{8}$ cup	$\frac{1}{2}$ cup	$\frac{1}{2}$ cup	$\frac{1}{2}$ cup.
Peanut butter or soy nut butter or other nut or seed butters	2 Tbsp	3 Tbsp	4 Tbsp	4 Tbsp	4 Tbsp.
Yogurt, plain or flavored unsweetened or sweetened ⁶	4 ounces or $\frac{1}{2}$ cup	6 ounces or $\frac{3}{4}$ cup	8 ounces or 1 cup ...	8 ounces or 1 cup ...	8 ounces or 1 cup.
The following may be used to meet no more than 50% of the requirement:					
Peanuts, soy nuts, tree nuts, or seeds, as listed in program guidance, or an equivalent quantity of any combination of the above meat/meat alternates (1 ounce of nuts/seeds = 1 ounce of cooked lean meat, poultry, or fish).	$\frac{1}{2}$ ounce = 50%	$\frac{3}{4}$ ounce = 50%	1 ounce = 50%	1 ounce = 50%	1 ounce = 50%.
Vegetables ^{7 8}	$\frac{1}{8}$ cup	$\frac{1}{4}$ cup	$\frac{1}{2}$ cup	$\frac{1}{2}$ cup	$\frac{1}{2}$ cup.
Fruits ^{7 8}	$\frac{1}{8}$ cup	$\frac{1}{4}$ cup	$\frac{1}{4}$ cup	$\frac{1}{4}$ cup	$\frac{1}{2}$ cup.
Grains (oz eq) ^{9 10 11}	$\frac{1}{2}$ ounce equivalent	$\frac{1}{2}$ ounce equivalent	1 ounce equivalent ..	1 ounce equivalent ..	2 ounce equivalents.

Endnotes:

¹ Must serve all five components for a reimbursable meal. Offer versus serve is an option for at-risk afterschool and adult participants.

² Larger portion sizes than specified may need to be served to children 13 through 18 years old to meet their nutritional needs.

³ Must be unflavored whole milk for children age one. Must be unflavored low-fat (1 percent fat or less) or unflavored fat-free (skim) milk for children two through five years old. Must be unflavored or flavored fat-free (skim) or low-fat (1 percent fat or less) milk for children 6 years old and older and adults. For adult participants, 6 ounces (weight) or $\frac{3}{4}$ cup (volume) of yogurt may be used to meet the equivalent of 8 ounces of fluid milk once per day when yogurt is not served as a meat alternate in the same meal.

⁴ A serving of fluid milk is optional for suppers served to adult participants.

⁵ Alternate protein products must meet the requirements in Appendix A to Part 226 of this chapter.

⁶ Yogurt must contain no more than 23 grams of total sugars per 6 ounces.

⁷ Pasteurized full-strength juice may only be used to meet the vegetable or fruit requirement at one meal, including snack, per day.

⁸ A vegetable may be used to meet the entire fruit requirement. When two vegetables are served at lunch or supper, two different kinds of vegetables must be served.

⁹ At least one serving per day, across all eating occasions, must be whole grain-rich. Grain-based desserts do not count towards the grains requirement.

¹⁰ Refer to FNS guidance for additional information on crediting different types of grains.

¹¹ Breakfast cereals must contain no more than 6 grams of sugar per dry ounce (no more than 21.2 grams sucrose and other sugars per 100 grams of dry cereal).

(3) * * *

TABLE 4 TO PARAGRAPH (c)(3)—CHILD AND ADULT CARE FOOD PROGRAM SNACK
[Select the appropriate components for a reimbursable meal]

Food components and food items ¹	Minimum quantities				
	Ages 1–2	Ages 3–5	Ages 6–12	Ages 13–18 ² (at-risk afterschool programs and emergency shelters)	Adult participants
Fluid Milk ³	4 fluid ounces	4 fluid ounces	8 fluid ounces	8 fluid ounces	8 fluid ounces.
Meat/meat alternates (edible portion as served):					
Lean meat, poultry, or fish	½ ounce	½ ounce	1 ounce	1 ounce	1 ounce
Tofu, soy products, or alternate protein products ⁴	½ ounce	½ ounce	1 ounce	1 ounce	1 ounce.
Cheese	½ ounce	½ ounce	1 ounce	1 ounce	1 ounce.
Large egg	½	½	½	½	½.
Cooked dry beans or peas	⅓ cup	⅓ cup	⅓ cup	⅓ cup	⅓ cup.
Peanut butter or soy nut butter or other nut or seed butters.	1 Tbsp	1 Tbsp	2 Tbsp	2 Tbsp	2 Tbsp.
Yogurt, plain or flavored unsweetened or sweetened ⁵	2 ounces or ¼ cup	2 ounces or ¼ cup	4 ounces or ½ cup	4 ounces or ½ cup	4 ounces or ½ cup.
Peanuts, soy nuts, tree nuts, or seeds	½ ounce	½ ounce	1 ounce	1 ounce	1 ounce.
Vegetables ⁶	½ cup	½ cup	¾ cup	¾ cup	½ cup.
Fruits ⁶	½ cup	½ cup	¾ cup	¾ cup	½ cup.
Grains (oz. eq.) ^{7 8 9}	½ ounce equivalent	½ ounce equivalent	1 ounce equivalent	1 ounce equivalent	1 ounce equivalent.

Endnotes:

¹ Select two of the five components for a reimbursable snack. Only one of the two components may be a beverage.

² Larger portion sizes than specified may need to be served to children 13 through 18 years old to meet their nutritional needs.

³ Must be unflavored whole milk for children age one. Must be unflavored low-fat (1 percent fat or less) or unflavored fat-free (skim) milk for children two through five years old. Must be unflavored or flavored fat-free (skim) or low-fat (1 percent fat or less) milk for children 6 years old and older and adults. For adult participants, 6 ounces (weight) or ¾ cup (volume) of yogurt may be used to meet the equivalent of 8 ounces of fluid milk once per day when yogurt is not served as a meat alternate in the same meal.

⁴ Alternate protein products must meet the requirements in Appendix A to part 226 of this chapter.

⁵ Yogurt must contain no more than 23 grams of total sugars per 6 ounces.

⁶ Pasteurized full-strength juice may only be used to meet the vegetable or fruit requirement at one meal, including snack, per day.

⁷ At least one serving per day, across all eating occasions, must be whole grain-rich. Grain-based desserts do not count towards the grains requirement.

⁸ Refer to FNS guidance for additional information on crediting different types of grains.

⁹ Breakfast cereals must contain no more than 6 grams of sugar per dry ounce (no more than 21.2 grams sucrose and other sugars per 100 grams of dry cereal).

* * * * *

Cynthia Long,

Administrator, Food and Nutrition Service.

Appendix

Note: This appendix will not appear in the Code of Regulations.

Regulatory Impact Analysis

Executive Order 12866 and 13563

Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This final rule has been determined to be economically significant and was reviewed by the Office of Management and Budget (OMB) in conformance with Executive Order 12866.

I. Statement of Need

USDA is finalizing its November 25, 2020, proposed rulemaking regarding child nutrition meal pattern requirements. Considering comments received, circumstances caused by the COVID-19 pandemic, and current dietary science, this final rule will establish transitional ⁷² standards to support the continued provision of nutritious school meals while USDA updates the meal pattern standards to more comprehensively reflect the *Dietary Guidelines for Americans, 2020–2025* and as schools recover from the pandemic. USDA will develop updated standards through a new rulemaking for implementation in school year (SY) 2024–2025 and beyond, based on current nutrition science and public input on how to build on the success of school meals in supporting healthy eating and improved dietary outcomes. This final rule will implement three transitional standards to provide immediate relief to schools during the return to traditional school meal service following extended use of COVID-19 flexibilities. The COVID-19 pandemic impacted the entire Nation, but schools faced challenges adjusting to widespread closures, online and hybrid

learning, and supply chain issues that affected the school meal service and the broader school environment. While USDA is committed to the service of nutritious meals through its programs, USDA also appreciates that the challenges facing schools are ongoing, and some schools are not prepared to fully meet the milk, whole grains, and sodium requirements from the 2012 rule in SY 2022–2023.⁷³ Many operators will need to reacquaint themselves with the 2012 standards after several years of Congressional, regulatory, and administrative interventions, followed by two years of meal

⁷² As noted in the preamble, standards in this rule will be effective only during the interim period before the new standards are promulgated. USDA intends the new rulemaking to be completed in time for SY 2024–2025, but in the unlikely event of a delay, the standards in this final rule would remain in effect until such new rulemaking is completed. Since USDA intends to establish new meal pattern requirements for SY 2024–2025 and beyond, the standards in this will be referenced to as “transitional” in this rule.

⁷³ **Federal Register:** *Nutrition Standards in the National School Lunch and School Breakfast Programs.*

pattern flexibilities provided in response to the public health emergency. As a result of these interventions and COVID-19 nationwide waivers, the 2012 whole grain-rich requirement and Sodium Target 2 have not been fully implemented, and the 2012 milk requirements have not been fully implemented in over five years. To meet this need, USDA is taking a two-stage approach to updating the school meal nutrition standards:⁷⁴

1. This final rule, which will establish standards for milk, whole grains, and sodium, is the first stage. These standards will respond to the needs of schools as they recover from the challenges of COVID-19, while also taking measured steps towards improving nutritional quality of meals offered.

2. USDA intends to issue a proposed rule in fall 2022 which will address school meal nutrition standards for SY 2024–2025 and beyond. The new rulemaking will advance permanent standards that further demonstrate USDA's commitment to nutritious school meals and that are consistent with the goals of the *Dietary Guidelines for Americans, 2020–2025* and nutrition science, as required by the National School Lunch Act.

The revised standards in this final rule are intended to be transitional, and apply only to the milk, whole grains, and sodium requirements. This final rule:

- Allows NSLP and SBP operators and some CACFP and SMP providers to offer flavored, low-fat milk.
- Requires at least 80 percent of the weekly grains in the school lunch and breakfast menus to be whole grain-rich.
- Maintains Sodium Target 1 for NSLP and SBP through SY 2022–2023, as well as for SBP in SY 2023–2024, and implements Sodium Target 1A for NSLP no later than SY 2023–2024.

Schools that can meet or exceed these transitional standards do not have to change their menus because of this final rule. USDA invites the public to comment on the content of this final rule, as well as provide comments to inform the future rulemaking. This includes comments that may assist in a comprehensive assessment of impacts of the areas addressed in this rule.

II. Comments

USDA received four substantive comments on the economic summary from the proposed rule. All comments expressed concern that a full analysis of long-term health impacts of

⁷⁴ As discussed in the preamble to the final rule, USDA considers the final rule to be a logical outgrowth of the proposed rule. However, even without the proposed rule and logical outgrowth, USDA determines there is good cause to publish these transitional standards as an interim final rule and is requesting comments on the transitional standards. Publication of these transitional standards by January 2022 is necessary for SY 2022–2023. Schools need to know the meal pattern requirements to procure the appropriate foods.

the proposed changes was not included. Respondents also voiced concerns about USDA not engaging with medical stakeholders to fully understand the health impacts of changing the 2012 standards for milk, whole grains, and sodium. There was particular concern with the proposed sodium changes.

USDA Response: USDA recognizes the need for updated standards to align with the goals of the *Dietary Guidelines for Americans, 2020–2025*. The two-stage regulatory process will allow time for USDA to engage with a variety of medical stakeholders. This final rule will serve as a transition to updated nutrition standards; a new rulemaking will include input from various stakeholders through public comments to assist in an in-depth assessment of potential impacts. Additionally, in SY 2023–2024, this rule will implement Sodium Target 1A for NSLP, which will support schools with a gradual transition to lower-sodium meals. This target is a 10 percent reduction from Sodium Target 1 for NSLP and represents an achievable goal while acknowledging the importance of gradual sodium reduction. A variety of factors, including implementation of FDA's voluntary reduction targets, developments in food science, and feedback from State and local stakeholders, will inform USDA's decisions regarding sodium moving forward.⁷⁵ USDA also increased the percentage of whole grain-rich offerings required from 50 percent in the proposed rule to 80 percent in this final rule. This recognizes the importance of whole grains in a nutritious diet while also acknowledging the near-term challenges of offering all whole grain-rich items.

III. Summary of Impacts

The estimated impacts of this rule reflect shifts in food purchases and labor resources incurred by schools for school meal production. There are no additional Federal revenues provided in this rule and schools will need to make menu modifications within current resources. The impacts of these shifts are quantified for this analysis to demonstrate the potential food and labor costs to schools as well as markets due to changes in purchasing patterns. The analyses provide the impact to schools of moving straight to the 2012 standards, which absent this rule would go into effect in SY 2022–2023 as well as the impact to schools of moving to the standards in this rule from current operations.

USDA estimates this final rule will save⁷⁶ schools \$0.15 cent per meal or \$1.1 billion annually compared to directly moving to the

⁷⁵ To learn more about the U.S. Food and Drug Administration's efforts to lower sodium in the U.S. food supply, visit: www.fda.gov/SodiumReduction.

⁷⁶ Except where noted in the participation impacts, the terms "costs" and "savings" are used in this analysis to describe the school level shifts in food purchases and labor associated with school meal production.

2012 standards for milk, whole grains, and sodium in SY 2022–2023.⁷⁷ Absent this rule it is estimated to cost \$1.3 billion annually or \$0.18 per meal for schools to move immediately to the 2012 milk, whole grains, and sodium requirements. The costs to schools are due to increased costs to procure entirely whole grain-rich offerings as well as increases in both food and labor costs to support scratch cooking to immediately comply with the Sodium Final Target.

Currently in SY 2021–2022, schools unable to meet the NSLP and SBP standards due to the pandemic can request targeted meal pattern waivers from their State agency, including for the milk, whole grains, and sodium requirements. Schools will need to transition from operating under the COVID-19 waivers to meeting the milk, whole grain and sodium requirements in this rule starting in SY 2022–2023. Relative to the current school year operations, this rule is estimated to potentially increase costs to schools by \$187 million annually or about \$0.03 per meal.⁷⁸ Most of these estimated costs are due to the requirement to offer at least 80 percent of grain offerings as whole grain-rich and for some schools that still need to meet Sodium Target 1 and Sodium Target 1A. USDA estimates whole grain-rich items to be more expensive than enriched items as schools shift to purchase more whole grain-rich items. Estimated costs associated with sodium are a result of increases in food and labor costs for schools that still need to meet Sodium Target 1 and Target 1A. Costs to offer low fat flavored milk as an option are due to low fat flavored milk being slightly more expensive than fat free flavored varieties.

The \$0.15 per meal savings provided by this rule is the cost of \$0.18 per meal to return to the 2012 standards minus the \$0.03 per meal costs associated with the requirements in this rule.⁷⁹ The changes in this rule are achievable and realistic for schools and recognize the need for strong nutrition standards in school meals. USDA intends to have updated regulations that further align school meal nutrition standards with the goals of the *Dietary Guidelines for Americans, 2020–2025* in place by SY 2024–2025. This analysis provides five-year cost streams to project potential impacts.

⁷⁷ The 2012 standards do not permit flavored low-fat milk, require all grains to be whole grain-rich, and require schools to meet the Sodium Final Target in SY 2022–2023.

⁷⁸ If all flavored fat-free milk is substituted with flavored low-fat milk, and schools regressed in whole grain-rich progress compared to SY 2014–2015, this rule is estimated to cost \$665 million the first year or \$0.09 more per meal.

⁷⁹ The 2012 standards do not permit low fat flavored milk which USDA estimates to be slightly more expensive than fat free flavored varieties. This slightly reduces the savings generated due to this rule as this rule permits low fat flavored. Voluntary incurring of a cost is likely associated with benefits that are difficult to quantify—potentially, in this case, including reduced food waste.

TABLE 1—STREAM OF QUANTIFIABLE COSTS TO SCHOOLS

	Fiscal Year (\$ millions)					
	2022	2023	2024	2025	2026	Total
NOMINAL COST STREAM						
MILK	\$2	\$13	\$13	\$14	\$14	\$56
80% WHOLE GRAIN-RICH	– 48	– 303	– 309	– 315	– 321	– 1,296
SODIUM TARGET 1 AND 1A	– 125	– 780	– 795	– 811	– 827	– 3,338
TOTAL	– 171	– 1,069	– 1,090	– 1,112	– 1,134	– 4,577
DISCOUNTED COST STREAM						
3 PERCENT	– 171	– 1,038	– 1,028	– 1,018	– 1,008	– 4,263
7 PERCENT	– 171	– 999	– 952	– 908	– 865	– 3,896

As required by OMB Circular A–4, in Table 2 below, the Department has prepared an accounting statement showing the

annualized estimates of benefits, costs, and transfers associated with the provisions of

this final rule. In the next section, an impact analysis is provided of each change.

TABLE 2—ACCOUNTING STATEMENT

	Range	Estimate	Year dollar	Discount rate (percent)	Period covered
Benefits:					
<i>Qualitative:</i> Provides achievable updates to the milk, whole grain-rich, and sodium standards to transition from COVID–19 operations.					
Annualized Monetized (millions/year)	n.a.	n.a.	n.a.	n.a.	FY 2022–2026
Costs incurred by schools:					
<i>Qualitative:</i> This final rule provides updates to the milk, whole grain-rich and sodium requirements for schools. The changes in this rule are achievable standards as schools move from COVID–19 operations to typical meal service. The estimated savings are generated from schools moving to the standards in this rule instead of moving to the 2012 meal standards. The estimated potential impacts are provided to quantify the changes in purchasing patterns and labor hours to meet these requirements.					
Annualized Monetized (\$millions/year)	Total	– \$830 – 877	2020 2020	7 3	FY 2022–2026
Federal costs:					
<i>Qualitative and Quantitative:</i> There are no estimated change in Federal reimbursement levels associated with this rule. It is assumed participation will not measurably change from the baseline approximated by the status quo. However, if this rule is not issued then (reflecting the same analytic baseline against which the school cost savings, above, are estimated) there is an estimated reduction due to schools leaving the NSLP and SBP due to difficulties returning to the 2012 standards. These figures are presented in the impact analysis.					
Annualized Monetized (\$millions/year)	n.a.	n.a.	n.a.	n.a.	FY 2022–2026

IV. Section by Section Analysis

This final rule provides standards related to milk, whole grains, and sodium that will set clear programmatic parameters as schools return to traditional meal service after over two years of serving meals under pandemic conditions. The Administration plans to propose new standards later in the year, after a robust engagement process with program stakeholders. Absent this rule, schools must return to the milk, whole grains, and sodium regulations from the 2012 rule, which:

- Allowed flavoring only in fat-free milk in the NSLP and SBP.
- Required that at least half of the grains offered in the NSLP be whole grain-rich (meaning the grain product contains at least 50 percent whole grains and the remaining grain content of the product must be enriched) in SY 2012–2013 and one year later in the SBP; and required that effective SY

2014–2015, all grains offered in both programs be whole grain-rich; and

- Required schools participating in the NSLP and SBP to reduce the sodium content of meals offered on average over the school week by meeting progressively lower sodium targets over a 10-year period. The 2012 rule directed SFAs to meet Sodium Target 1 by SY 2014–2015, Sodium Target 2 by SY 2017–2018, and the Sodium Final Target by SY 2022–2023.

As noted earlier, full implementation of the 2012 meal pattern requirements for milk, whole grains, and sodium has been delayed due to legislative, regulatory, and administrative actions, and the COVID–19 pandemic. This section assesses the impact of this rule as well as the impact absent this rule, which would restore the above 2012 standards for milk, whole grains, and sodium.

A. Key Assumptions

USDA conducted a comprehensive study on the school meal programs in SY 2014–2015 called the *School Nutrition and Meal Cost Study*. Data from this study are the most current available on the status of schools meeting the nutrition standards.⁸⁰ The following impact analyses use SY 2014–2015 data as applicable and more recent information to make assumptions to estimate the status. Additionally, data on the value of school district acquisitions are from the *School Food Purchase Study* reflecting SY 2009–2010. This is the most current school district food acquisition data available and

⁸⁰ USDA started to collect data for the next iteration of the School Nutrition Meal Cost study which is the comprehensive assessment of the school meal program in SY 2019–2020. Data collection was stopped due to COVID–19 pandemic and the resulting school closures. The study is now planned to collect data in SY 2022–2023.

figures from this study are inflated to reflect current prices. However, the distribution of the types of foods school districts purchase may have shifted during the implementation of the 2012 standards and more recently due to COVID-19 operations.

The analyses assume Congress will not override these final standards for the milk, whole grains, and sodium requirements in the near-term. The base analyses also assume that after two and one-half years of serving meals through COVID-19 waivers, school meal participation will normalize to be consistent with service levels in FY 2019. Simulation of different participation levels are presented in the *Uncertainty Section*.

This analysis also assumes that due to the plan to revise these standards via another rulemaking that there will not be any measurable health or nutritional impact of the changes in this rule. This rule builds on the major achievements schools already made improving school meals to support healthy diets for school children. Schools have made significant progress towards healthier school meals. Between SY 2009–2010 and SY 2014–2015, “Healthy Eating Index–2010” (HEI–2010) scores of diet quality for NSLP and SBP increased significantly. Over this period, the mean HEI–2010 score for NSLP lunches increased from 57.9 to 81.5 out of a possible 100 points, and the mean HEI–2010 score for SBP breakfasts increased from 49.6 to 71.3 out of a possible 100 points. These significant increases in HEI are driven by the full suite of the 2012 standards including higher scores for fruits and vegetables and reduction in empty calories.

HEI–2010 scores also greatly improved for whole grains. In SY 2014–2015, the HEI–2010 component score for whole grains in NSLP lunches served improved significantly from SY 2009–2010 to SY 2014–2015, by 71 percentage points (from 25 to 95 percent of the maximum score). Similarly, for SBP breakfasts served, the score for whole grains increased by 58 percentage points (from 38 to 96 percent of the maximum score) over the same timeframe.⁸¹

In SY 2014–2015, the HEI–2010 score for sodium improved significantly from a score of 10 percent of the maximum score to 27 percent of the maximum score, which reflects the majority of schools meeting Sodium Target 1 in the first-year schools were required to meet Sodium Target 1. From SY 2009–2010 to SY 2014–2015, the average sodium content of NSLP lunches decreased between 15 percent and 21 percent and SBP breakfasts decreased between 10 percent to 15 percent. By comparison, from SY 2004–2005 to SY 2009–2010, sodium levels for NSLP lunches and SBP breakfasts decreased by 2 percent and 11 percent, respectively.⁸²

⁸¹ These improvements were made with on average schools offering 70 percent of grain offerings as whole grain-rich. In SY 2014–2015, one quarter (27 percent) of weekly lunch menus met the new requirement, which was first implemented in SY 2014–2015. The majority (87 percent) of weekly lunch menus met the requirements from the prior school year—that at least 50 percent of grains be whole grain-rich.

⁸² U.S. Department of Agriculture, Food and Nutrition Service, School Nutrition and Meal Cost

While the HEI–2010 scores for meals offered significantly improved after implementation of the 2012 meal standards, the HEI–2010 scores for the lunches and breakfasts consumed by students participating in NSLP and SBP in SY 2014–2015 were significantly higher than nonparticipants. Students who ate a school lunch were more likely to consume milk, fruits, and vegetables and less likely to consume desserts, snack items, and non-milk beverages at lunch than students who ate lunch from home or other places. NSLP lunches consumed had significantly higher HEI–2010 scores compared to lunches consumed from home or other places (80 percent versus 65 percent out of a possible 100 points). The lunches consumed by NSLP participants received significantly higher scores than the lunches consumed by matched nonparticipants for total vegetables (52 percent of the maximum score versus 38 percent), whole grains (100 percent versus 63 percent), and dairy (100 percent versus 69 percent). Additionally, lunches consumed by NSLP participants were lower in calories, total fat, and saturated fat than lunches consumed by matched nonparticipants. Breakfasts consumed by SBP participants contained significantly larger amounts of fruit and whole grains than breakfasts consumed by matched nonparticipants and had a significantly higher HEI–2010 score than breakfasts consumed by matched nonparticipants (66.1 percent versus 58.9 percent).⁸³ School meals serve as a critical source of nutrition for the nation’s children especially for children in low-income households.⁸⁴

The HEI measures alignment with the *Dietary Guidelines of Americans*, which are set based on nutrition recommendations and evidence of health benefits. Research has shown that closer alignment with the Dietary Guidelines reduces the risk of obesity related chronic diseases.⁸⁵ The improvements in HEI scores further demonstrate the extension of the current health benefits realized by the 2012 standards to date and the importance of starting healthy eating habits early.

Study Final Report Volume 2: Nutritional Characteristics of School Meals, by Elizabeth Gearan et al. Project Officer, John Endahl, Alexandria, VA: April 2019. Available online at: www.fns.usda.gov/research-and-analysis.

⁸³ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 4: Student Participation, Satisfaction, Plate Waste, and Dietary Intakes by Mary Kay Fox, Elizabeth Gearan, Charlotte Cabili, Dallas Dotter, Katherine Niland, Liana Washburn, Nora Paxton, Lauren Olsho, Lindsay LeClair, and Vinh Tran. Project Officer: John Endahl. Alexandria, VA: April 2019.

⁸⁴ A higher percentage of income-eligible NSLP participants consumed any items from the vegetables, fruit, milk products, and mixed dish categories compared with income-eligible nonparticipants: Unreleased USDA report using 2011–2016 National Health and Nutrition Examination Survey (NHANES) data to examine the relationship between estimated program participation, diet quality, indicators of nutrition and health, food consumption patterns, and nutrient intakes.

⁸⁵ *Dietary Guidelines for Americans, 2020–2025*.

Early in the COVID–19 pandemic, many schools transitioned to serving meals under the Summer Food Service Program, which operates under a separate, simpler meal pattern. In SY 2021–2022, schools were still able to offer all meals free, but through the Seamless Summer Option, which uses the NSLP and SBP meal patterns. This transitioned schools back to the healthier school meals that are traditionally offered during the school year. However, supply chain disruptions created additional challenges, and many schools needed waivers for specific meal pattern requirements, including milk, whole grains, and sodium. It is expected that the overall positive nutritional impacts of the 2012 meal standards will continue to benefit school children as this rule makes achievable adjustments to strengthen the meal standards while balancing the need to support schools during transition from COVID–19 operations and supply chain disruptions. This rule builds on the significant progress schools already made in implementing the 2012 standards.

Absent this rule, schools would be required to meet the 2012 standards, which would not permit flavored low-fat milk, require all grains to be whole grain-rich, and require schools to meet the Sodium Final Target in SY 2022–2023. While these requirements would further nutritional improvements in school meals, many schools would not be able to fully meet these requirements in the near term. This is particularly true for the Sodium Final Target. The time needed to successfully lower sodium levels in school meals will vary considerably. For certain products, lowering sodium levels in school meals may be quicker and for other products it may require more time. This transitional rule will give schools more time to work to identify student preferences through combination of practices including taste tests, tailoring menu options, promoting healthy choices, and making incremental menu changes.⁸⁶

Implementing the Sodium Final Target would require a significant reduction over an extremely short period of time, which would not be achievable for both industry and schools. The 2012 sodium reduction timeline was never fully implemented due to a long history of administrative and legislative actions that delayed implementation of Sodium Target 2. It is unrealistic to expect full implementation of the 2012 standards for milk, whole grains, and sodium and the associated nutritional improvement to be realized in SY 2022–2023 due to the significant challenges facing schools and industry in the near term. As USDA commences subsequent rulemaking to propose and finalize long-term standards, the nutritional impacts resulting from changes to the milk, whole grains, and sodium requirements will be reexamined and included in the process. USDA welcomes any

⁸⁶ Gordon, E.L., Morrissey, N., Adams, E., Wieczorek, A. Glenn, M.E., Burke, S. & Connor, P. (2019). Successful Approaches to Reduce Sodium in School Meals Final Report. Prepared by 2M Research under Contract No. AG–3198–P–15–0040. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.

additional information that should be considered on the nutritional impacts of the milk, whole grains, and sodium requirements in this rule.

B. Impacts

Milk Standard

In this final rule, USDA allows NSLP and SBP operators the option to offer flavored low-fat milk and requires unflavored milk to be offered at each meal service. This flavored milk standard will be extended to beverages for sale during the school day and will also apply in the SMP and CACFP for participants ages 6 years and older. The decision to allow flavored low-fat milk reflects concerns about declining milk consumption and the importance of the key nutrients provided by

milk for school-aged children.⁸⁷ Menu planners must make necessary adjustments in the weekly menu to account for the additional calories and fat content associated with offering flavored low-fat milk. This final rule does not change the upper caloric and fat limits specified in the 2012 rule or the requirement to offer a variety (at least two choices) of fluid milk in the NSLP and SBP.

Unflavored low-fat and flavored fat-free milks were the most frequently offered varieties on daily menus in SY 2014–2015. The change in this rule may result in SFAs substituting flavored fat-free milk varieties with flavored low-fat varieties. About 91 percent of daily NSLP menus and 76 percent of daily SBP menus offered flavored fat-free milk.⁸⁸ The cost for eight ounces of flavored

low-fat milk is on average about \$0.02 higher than flavored fat-free milk.⁸⁹ If across all NSLP and SBP menus, all flavored low-fat milk was substituted with flavored fat-free milk, it would cost about \$126 million more a year. Not all schools will want to make this substitution as the change must be made within current resources and caloric and fat limits. Based on the most current data available, about 8 percent of school districts requested an exemption to serve flavored low-fat milk.⁹⁰ Using the average number of children per school district,⁹¹ it is estimated that about 9 percent of daily NSLP and SBP menus include flavored low-fat milk through exemptions or flexibilities. USDA estimates this to be about \$13 million more a year in the value spent on milk.

TABLE 3—ESTIMATED IMPACT OF PURCHASING LOW FAT FLAVORED MILK
[Millions]

Substitution level	Estimated annual cost
MAXIMUM—REPLACE ALL FAT FREE FLAVORED WITH LOW FAT FLAVORED	\$126
MINIMUM—9 PERCENT OF DAILY MENUS REPLACED FAT FREE WITH LOW FAT FLAVORED (BASED ON EXEMPTION DATA)	13

Most milk producers likely supply both varieties, which minimizes actual industry impacts. The additional cost of flavored low-fat milk may result in purchasing pattern shifts in school districts choosing to serve flavored low-fat milk. USDA estimates that this final rule will increase the milk cost and/or transfers from anywhere between \$13 million and \$126 million. Absent this rule, there would be a reduction in milk costs of the same range due to the restriction on offering flavored low-fat milk.⁹²

Whole Grain-Rich Standard

Starting in SY 2022–2023, this final rule will require that at least 80 percent of the grains offered in the NSLP and SBP meet the whole grain-rich criteria specified in FNS guidance, and the remaining grain items offered must be enriched. The 2012 final rule required all grains to be whole grain-rich by SY 2014–2015; however, this requirement was never fully implemented due to a long history of administrative and legislative actions, including exemptions that began in the first year of implementation. In SY 2014–2015, the first year in which all grains were required to be whole grain-rich, only 27 percent of weekly lunch menus met this requirement. However, the majority (87 percent) of weekly lunch menus offered at

least 50 percent of the grains as whole grain-rich. In SBP, about half of all weekly breakfast menus offered only whole grain-rich grains, while 95 percent offered at least 50 percent of the grains as whole grain-rich. Despite some challenges, schools have made considerable progress offering whole grain-rich products. On average, in SY 2014–2015, 70 percent of the weekly menus offered at least 80 percent of the grain items as whole grain-rich for both breakfast and lunch.⁹³ This rule recognizes this progress and the nutritional importance of whole grains, while still providing support for schools facing challenges serving all grain items as whole grain-rich.

This analysis is based on the price difference between whole grain-rich items and enriched grain items to calculate the impact associated with changing the whole grain-rich requirement. The 2012 final meal standards rule Regulatory Impact Analysis estimated that whole grain-rich items cost 34 percent more than enriched grain items.⁹⁴ While this is an older analysis, it is still the most current available. However, there are other more recent data points that suggest that this price difference is likely lower due to wider availability of whole grain-rich items. Over 85 percent of the grain offerings

in NSLP and SBP in SY 2014–2015 were whole grain-rich. This suggests most items are whole grain-rich, but certain grains may be more difficult to find in acceptable whole grain-rich form, including commonly offered items such as croutons, biscuits, and rolls.⁹⁵ Additionally, during the period in which schools needed an exemption if they were unable to meet the requirement to offer all grains as whole grain-rich, use of the exemption was relatively low. According to an unpublished USDA study, as of SY 2017–2018, 28 percent of SFAs requested an exemption for the whole grain-rich requirement in at least one school year. In SY 2017–2018, 24 percent requested an exemption. The availability of whole grain-rich products through USDA Foods and the commercial market has increased significantly since the implementation of the 2012 meal standards. Additionally, there was no consistent significant difference in the cost per meal between schools that offered at least 50 percent whole grain-rich items and schools that offered under 50 percent. There was also no significant difference in the meal

⁸⁷ <https://www.gpo.gov/fdsys/pkg/FR-2017-11-30/pdf/2017-25799.pdf>.

⁸⁸ U.S. Department of Agriculture, Food and Nutrition Service, School Nutrition and Meal Cost Study Final Report Volume 2: Nutritional Characteristics of School Meals, by Elizabeth Gearan et al. Project Officer, John Endahl, Alexandria, VA: April 2019. Available online at: www.fns.usda.gov/research-and-analysis.

⁸⁹ U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis, School Food Purchase Study-III, by Nick Young et al. Project Officer: John R. Endahl, Alexandria, VA: March 2012.

⁹⁰ Based on unpublished USDA data: Child Nutrition Program Operations study year 3.

⁹¹ There were no significant characteristics of these school district suggesting that smaller or larger districts requesting the exemption. This analysis assumes that about 57 percent of children enrolled in the 8 percent of districts requesting an exemption participate in the NSLP and about 30 percent participate in the SBP.

⁹² Voluntary incurring of a cost is likely associated with benefits that are difficult to quantify—potentially, in this case, including reduced food waste.

⁹³ Based on an internal USDA analysis using data from: U.S. Department of Agriculture, Food and

Nutrition Service, School Nutrition and Meal Cost Study Final Report Volume 2: Nutritional Characteristics of School Meals, by Elizabeth Gearan et al. Project Officer, John Endahl, Alexandria, VA: April 2019. Available online at: www.fns.usda.gov/research-and-analysis.

⁹⁴ Footnote in the CACFP rule provides the citation for the 34% as it was based on an internal USDA analysis and it is not in the published 2012 meal standards rule <https://www.regulations.gov/document/FNS-2011-0029-4304>.

⁹⁵ These were the items that school districts requested exemptions to serve based on informal USDA data.

costs for schools meeting the overall grain quantity requirement.⁹⁶

For these reasons, this analysis estimates a price increase of 15 percent for whole grain-rich items over enriched grain items to estimate the impact of serving more whole grain-rich items. Using data from the SY 2009–2010 School Food Purchase Study III,

which collects data on the value of school district food acquisitions,⁹⁷ a weighted average price per ounce of grains is calculated. This price per ounce is then adjusted by the Producer Price Index for grains to account for inflation since these data were collected. The adjusted price per ounce is \$0.10. As noted, this analysis

assumes whole grain-rich items are estimated to cost 15 percent more than the estimated \$0.10 per ounce of grain. This means that it costs \$0.015 more on average for an ounce of whole grain-rich grains compared to an ounce of enriched grains.

TABLE 4—PRICE PER POUND FOR GRAIN ITEMS FROM SCHOOL FOOD PURCHASE STUDY III

Grain item group	\$ Value purchased	Pounds purchased	Price per pound	Price per oz
BREAD & ROLLS	\$465,505,505	406,629,005	\$1.1448	\$0.0715
PASTA & NOODLES	22,795,477	24,500,911	0.9304	0.0581
RICE, BARLEY & OTHER GRAINS	17,626,092	18,115,017	0.9730	0.0608
TOTAL WEIGHTED	505,927,074	449,244,933	1.1262	0.0704

Schools must offer a minimum quantity of grains daily and weekly for both lunch and breakfast; these requirements vary for the three age/grade groups. For the 9–12 age/grade group, the minimum quantity of grain that must be offered per week is 10 oz equivalent, which is the sum of the daily quantity requirement of 2 oz equivalents. For the K–5 and 6–8 age/grade groups, the

required weekly quantity is higher than the daily totals summed across the week.⁹⁸ The average weighted daily quantity of grains necessary to meet the average weekly requirement across all age/grade groups and NSLP and SBP is 1.68 oz equivalents (or 8.44 oz equivalents across the week). The 1.68 oz equivalents of whole grain-rich grains a day is estimated to cost \$0.025 (1.68 × \$0.015)

more than the cost of 1.68 oz equivalents of enriched grain items. This price difference applied to the number of additional grain oz equivalents that schools will need to offer as whole grain-rich to meet the requirements of this final rule, multiplied by the number of meals, provides an estimated value of the cost to transition more offerings to whole grain-rich.

TABLE 5—OUNCE EQUIVALENTS AT EACH WHOLE GRAIN-RICH LEVEL

Whole grain-rich requirement percentage	Total weekly ounce equivalents required
100 PERCENT (2012 REQUIREMENT)	8.44
80 PERCENT (THIS FINAL RULE)	6.75
50 PERCENT (PRIOR REQUIREMENT)	4.22
75 PERCENT (ESTIMATED CURRENT LEVEL)	6.33

The range of costs are built on two separate sets of assumptions. The high estimated cost level assumes that because the 2012 whole grain-rich requirement was never fully implemented, all schools moved back to the requirement to offer half of grains as whole grain-rich which was the requirement in the proposed rule. This is likely an overestimate due to the significant progress schools and the food industry have made since SY 2012–2013. The low estimated scenario, which is the expected scenario, uses the information to-date on whole grain-rich progress and assumes that on average schools are currently

offering 75 percent grain items as whole grain-rich. This uses the information that 70 percent of weekly menus at schools were already offering at least 80 percent of grain items as whole grain-rich in SY 2014–2015.

These estimated costs may be incurred by the school district and/or within the grain market in the form of purchases of additional whole grain-rich varieties. Schools may shift away from items that are not preferred as whole grain-rich and substituting different whole grain-rich items. This could potentially reduce variety and impact the manufacturers of these items, possibly

resulting in loss of some of the school market or increased costs to develop successful whole grain-rich options.

Table 6 shows the costs associated with moving fully to 2012 standard that all grains are whole grain-rich and moving to the 80 percent threshold in this rule from both estimated starting points (75 percent and 50 percent of grains as whole grain-rich). These are the costs if this rule is not issued, and schools must return to the 2012 standard of exclusively offering whole grain-rich items. The costs associated with moving to the 80 percent threshold are the costs of this rule.

TABLE 6—ESTIMATED COSTS OF INCREASING WHOLE GRAIN-RICH ITEMS
[Millions]

Whole grain-rich requirement	Expected annual cost (increasing from 75 percent WGR)	High annual cost (increasing from 50 percent WGR)
INCREASING TO 80 PERCENT	\$76	\$454

⁹⁶ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 3: School Meal Costs and Revenues by Christopher Logan, Vinh Tran, Maria Boyle, Ayesha Enver, Matthew Zeidenberg, and Michele

Mendelson. Project Officer: John Endahl. Alexandria, VA: April 2019.

⁹⁷ U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis, School Food Purchase Study-III, by Nick Young et al. Project Officer: John R. Endahl, Alexandria, VA: March 2012.

⁹⁸ This assumes a 5-day school week and the daily quantity for K–5 and 6–8 age/grade groups is 1 oz equivalents and the weekly requirement is 8 oz equivalents for NSLP and 7 oz equivalents for SBP.

TABLE 6—ESTIMATED COSTS OF INCREASING WHOLE GRAIN-RICH ITEMS—Continued
[Millions]

Whole grain-rich requirement	Expected annual cost (increasing from 75 percent WGR)	High annual cost (increasing from 50 percent WGR)
INCREASING TO 100 PERCENT	379	757

Without this final rule, schools would be required to meet the 2012 requirement to offer all grains as whole grain-rich. Compared to the 2012 requirement, this rule is estimated to save \$303 million annually by instead requiring 80 percent of grains offered to be whole grain-rich.

Sodium Standard

The 2012 Final Rule directed schools to meet Sodium Target 1 by SY 2014–2015, Sodium Target 2 by SY 2017–2018, and the Sodium Final Target by SY 2022–2023. This rule extends Sodium Target 1 through the end of SY 2022–2023 for both NSLP and SBP and requires compliance with Sodium Target 1A for NSLP starting in SY 2023–2024. In the absence of this rule, schools would be required to implement the Sodium Final Target for both NSLP and SBP in SY 2022–2023.

In SY 2014–2015, the first year Target 1 was scheduled to take effect, 72 percent of all average weekly NSLP menus, and 67 percent of all average weekly SBP menus, met Target 1.⁹⁹ According to the USDA study on Successful Approaches to Reduce Sodium in School Meals,¹⁰⁰ schools, Food Service Management Companies, and manufacturers noted that it was possible to meet Target 1 with foods already developed but to implement the subsequent targets, schools will likely need to move to more scratch cooking. Almost 80 percent of schools do some scratch cooking and 70 percent of schools do on-site preparation, where the school prepares meals on-site for serving only at that school.¹⁰¹ This suggests that schools in general have the structure to conduct some scratch cooking, but that reductions in sodium may result in more labor-intensive food preparations and/or additional infrastructure needs.

There was no significant difference between the cost per meal for schools that

were meeting Target 1 and those that were not meeting Target 1.¹⁰² Given that most schools were able to meet Target 1 with available food or with few changes to meal-preparation, this finding is not surprising, but may not be sustained as further sodium Targets are implemented. The need for more labor-intensive food preparation, including scratch cooking, would likely continue until lower sodium products are more readily available in the school food market, which will take time.

Industry members reported in the USDA study on Successful Approaches to Reduce Sodium in School Meals that to be successful in reducing sodium, taste tests with students are critical before mass production. Industry reported that this process can take time and if not done correctly may result in increased plate waste or students choosing not to participate in school meals. If school meals taste markedly different than foods that students eat outside of school, which may have much more sodium, it can be difficult to gain their acceptance of the foods served in schools.

About three-quarters of school food service directors reported in SY 2016–2017 that gaining student acceptance of the new standards was moderately to extremely challenging with respect to maintaining student participation.¹⁰³ Returning to the 2012 standards in SY 2022–2023 will not allow for sufficient time for industry to continue to successfully reduce sodium levels in products for the school market.

The Final Sodium Target in the 2012 standards was meant to be achieved over a period of ten years while meeting two interim sodium Targets. Sodium Target 2 was a 20 percent reduction from Sodium Target 1. The Sodium Final Target was another 25 percent reduction from Sodium Target 2 and a 40 percent reduction from Sodium Target 1.¹⁰⁴ Like the 2012 whole grain-rich requirement, schools were never required to fully adhere to the 2012 sodium reduction timeline due to a long history of administrative and legislative actions. The immediacy of going straight to the Sodium

Final Target when the gradual sodium reduction did not occur as intended, compounded by the COVID-19 pandemic, will likely be extremely difficult due to the drastic reduction required over a short period of time. Meeting the Sodium Final Target would be a 35 percent drop on average for NSLP and SBP from sodium levels in prepared meals in SY 2014–2015.¹⁰⁵

Industry has made great strides in producing lower sodium products since the implementation of the 2012 standards and USDA Foods increased lower sodium offerings; however, additional time is necessary for industry to adjust and continue to formulate lower sodium products. The FDA, in October 2021, released voluntary sodium reduction targets for the food industry. The FDA's guidance provides voluntary short-term (2.5 year) sodium reduction targets for food manufacturers, chain restaurants, and food service operators for 163 categories of processed, packaged, and prepared foods. The targets in the FDA's guidance seek to support decreasing average U.S. population sodium intake from approximately 3,400 mg to 3,000 mg per day, about a 12 percent reduction. While FDA is recommending the voluntary targets be met in 2.5 years, in advance of that timeframe schools are anticipated to be able to procure additional options that are lower in sodium as the food industry continues reformulation efforts and develops new food products that align with FDA's voluntary targets.¹⁰⁶

The USDA study on Successful Approaches to Reduce Sodium in School Meals also noted that reducing sodium can be challenging, especially when using pre-packaged products, which may result in schools no longer purchasing these items.¹⁰⁷ Combination entrees and accompaniments contributed the most (61 percent) to the

⁹⁹ U.S. Department of Agriculture, Food and Nutrition Service, School Nutrition and Meal Cost Study Final Report Volume 2: Nutritional Characteristics of School Meals, by Elizabeth Gearan et al. Project Officer: John Endahl, Alexandria, VA: April 2019. Available online at: www.fns.usda.gov/research-and-analysis.

¹⁰⁰ Gordon, E.L., Morrissey, N., Adams, E., Wiecek, A. Glenn, M.E., Burke, S & Connor, P. (2019). Successful Approaches to Reduce Sodium in School Meals Final Report. Prepared by 2M Research under Contract No. AG-3198-P-15-0040. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.

¹⁰¹ Standing, Kim, Joe Gasper, Jamee Riley, Laurie May, Frank Bennici, Adam Chu, and Sujata Dixit-Joshi. Special Nutrition Program Operations Study: State and School Food Authority Policies and Practices for School Meals Programs School Year 2012–13. Project Officer: John R. Endahl. Prepared by Westat for the U.S. Department of Agriculture, Food and Nutrition Service, October 2016.

¹⁰² U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 3: School Meal Costs and Revenues by Christopher Logan, Vinh Tran, Maria Boyle, Ayesha Enver, Matthew Zeidenberg, and Michele Mendelson. Project Officer: John Endahl. Alexandria, VA: April 2019.

¹⁰³ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, Child Nutrition Program Operations Study (CN-OPS-II): SY 2016–17. Beyler, Nick, Jim Murdoch, and Charlotte Cabili. Project Officer: Holly Figueroa. Alexandria, VA: June 2021.

¹⁰⁴ Percent decreases are based on the sum of Sodium Target lunch and breakfast requirements.

¹⁰⁵ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 2: Nutritional Characteristics of School Meals by Elizabeth Gearan, Mary Kay Fox, Katherine Niland, Dallas Dotter, Liana Washburn, Patricia Connor, Lauren Olsho, and Tara Wommak. Project Officer: John Endahl. Alexandria, VA: April 2019.

¹⁰⁶ U.S. Food and Drug Administration: *Voluntary Sodium Reduction Goals: Target Mean and Upper Bound Concentrations for Sodium in Commercially Processed, Packaged, and Prepared Foods*. October 2021 <https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-voluntary-sodium-reduction-goals>.

¹⁰⁷ Gordon, E.L., Morrissey, N., Adams, E., Wiecek, A. Glenn, M.E., Burke, S & Connor, P. (2019). Successful Approaches to Reduce Sodium in School Meals Final Report. Prepared by 2M Research under Contract No. AG-3198-P-15-0040. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.

sodium levels of prepared foods, specifically sandwiches with plain meat and poultry, condiments, and toppings.¹⁰⁸ This may financially impact the manufacturers of these products if they are not able to successfully reduce the sodium levels of products sold to schools.

This final rule maintains Sodium Target 1 for NSLP and SBP through SY 2022–2023, retains Sodium Target 1 for SBP in SY 2023–2024, and institutes a modified Sodium Interim Target 1A for NSLP beginning in SY 2023–2024.¹⁰⁹ USDA set the near-term Target 1A reduction at 10 percent, which also aligns

with research indicating gradual sodium reductions are less noticeable to consumers.¹¹⁰ Target 1A is about a 1 percent to 5 percent decrease from sodium levels in prepared meals in SY 2014–2015 for K–5 and 9–12 age grade groups and a 2 percent increase for 6–8 age/grade group.¹¹¹

TABLE 8—SODIUM TARGET 1 AND 1A AND AVERAGE WEEKLY SODIUM LEVELS FOR PREPARED MEALS

Age/grade group	Sodium Target 1 NSLP	SY 2014–2015 NSLP average sodium levels ¹¹²	% Difference from Sodium Target 1	Target 1A NSLP	% Difference from Sodium Target 1A
K–5	1,230	1,125	–9	1,110	–1
6–8	1,360	1,200	–12	1,225	2
9–12	1,420	1,345	–5	1,280	–5
	Sodium Target 1 SBP	SY 2014–2015 SBP average sodium levels ¹¹³	% Difference from Sodium Target 1		
K–5	540	505	–6		
6–8	600	564	–6		
9–12	640	584	–9		

To estimate the impacts associated with additional sodium reduction, this analysis focuses on the increased need for scratch cooking due to immediate sodium reduction timeframe which does not allow for sufficient time for product development as noted earlier. Scratch cooking is one method to reduce sodium levels and over time can be successfully integrated into a comprehensive sodium reduction plan along with incorporating more lower sodium products into menus. Schools would be able to balance scratch cooking with lower sodium products as industry continues to formulate lower sodium foods. The requirement of the Sodium Final Target going into effect immediately in SY 2022–2023 absent this rule will require schools to move straight to cooking more recipes from scratch. As schools prepare more foods on site, labor costs will increase as prepackaged foods are substituted with scratch cooked foods and schools will need to increase time spent on food preparation. This may require hiring

more school food service staff and/or reallocating responsibilities. In addition to labor impacts, the types of foods schools purchase will likely change due to reducing the prepackaged foods and increasing ingredient-based items to support sodium reduction. For example, the USDA study on Successful Approaches to Reduce Sodium in School Meals found that school districts in the study reported serving more fresh fruits and vegetables to reduce sodium content. This may cause a reduction in food costs if items purchased to scratch cook are less expensive; however, these costs may be offset by the quantity needed or additional foods purchased to prepare meals from scratch.

Food and labor costs account for the vast majority (45 percent each for a total of 90 percent) of the average cost to produce a school lunch for a school district. Other reported direct costs are the remaining 10 percent. This distribution is similar for SBP breakfasts.¹¹⁴ To simulate the potential increase in costs due to changes to the

Sodium Targets, this analysis focuses on the estimated increase in labor costs, however food costs are also estimated to proportionally increase based on the distribution of food and labor costs in a school meal.¹¹⁵

To capture current scratch cooking practices to estimate the potential increase in scratch cooking and the corresponding impacts, data from USDA's Farm to School Census¹¹⁶ are used. While the Farm to School Census does not represent all school districts, it does encompass the majority: 65 percent of school districts reported that they participated in at least one Farm to School activity in SY 2018–2019. The distribution of prevalence of scratch cooking from the Farm to School Census is assumed across the 97,000 schools for this analysis.¹¹⁷ In this respect, these estimates may overstate the current scratch cooking levels with the assumption that school districts participating in Farm to School activities may be more likely to prepare more recipes from scratch.

¹⁰⁸ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 2: Nutritional Characteristics of School Meals by Elizabeth Gearan, Mary Kay Fox, Katherine Niland, Dallas Dotter, Liana Washburn, Patricia Connor, Lauren Olsho, and Tara Wommak. Project Officer: John Endahl. Alexandria, VA: April 2019.

¹⁰⁹ As noted in the preamble, when examining the daily sodium allocation attributed to each meal, USDA determined that sodium reductions are most needed at lunch. Therefore, USDA is maintaining Sodium Target 1 for breakfast during the two-year timeframe of this transitional rule, which will allow schools to focus their sodium reduction efforts on school lunch.

¹¹⁰ Institute of Medicine 2010. *Strategies to Reduce Sodium Intake in the United States*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/12818>.

¹¹¹ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School

Nutrition and Meal Cost Study, Final Report Volume 2: Nutritional Characteristics of School Meals by Elizabeth Gearan, Mary Kay Fox, Katherine Niland, Dallas Dotter, Liana Washburn, Patricia Connor, Lauren Olsho, and Tara Wommak. Project Officer: John Endahl. Alexandria, VA: April 2019.

¹¹² U.S. Department of Agriculture, Food and Nutrition Service, School Nutrition and Meal Cost Study Final Report Volume 2: Nutritional Characteristics of School Meals, by Elizabeth Gearan et al. Project Officer, John Endahl, Alexandria, VA: April 2019. Available online at: www.fns.usda.gov/research-and-analysis.

¹¹³ U.S. Department of Agriculture, Food and Nutrition Service, School Nutrition and Meal Cost Study Final Report Volume 2: Nutritional Characteristics of School Meals, by Elizabeth Gearan et al. Project Officer, John Endahl, Alexandria, VA: April 2019. Available online at: www.fns.usda.gov/research-and-analysis.

¹¹⁴ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School

Nutrition and Meal Cost Study, Final Report Volume 3: School Meal Costs and Revenues by Christopher Logan, Vinh Tran, Maria Boyle, Ayesha Enver, Matthew Zeidenberg, and Michele Mendelson. Project Officer: John Endahl. Alexandria, VA: April 2019.

¹¹⁵ This distribution of food, labor, and other has remained consistent between the two study time periods (SY 2005–2006 and SY 2015–2015). The School Lunch and Breakfast Cost Study—II in SY 2005–2006 and School Nutrition Meal Cost study in SY 2014–2015.

¹¹⁶ Bobronnikov, E. et al. (2021). Farm to School Grantee Report. Prepared by Abt Associates, Contract No. AG–3198–B–16–0015. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, Project Officer: Ashley Chaifetz.

¹¹⁷ Applying this distribution to schools assumes no significant variation in scratch cooking by school district characteristics.

TALBE 7—PERCENT OF SCHOOL DISTRICTS BY PERCENT OF SCRATCH COOKED RECIPES
[Farm to School Census data]

Prevalence	Percent of schools
<25% RECIPES MADE FROM SCRATCH	40
26–50% RECIPES MADE FROM SCRATCH	32
51–75% RECIPES MADE FROM SCRATCH	19
76–100% RECIPES MADE FROM SCRATCH	10

This analysis assumes that 2 hours a day of additional labor is needed to increase scratch cooking to meet the Sodium Final Target.¹¹⁸ This could be achieved by hiring a new employee for 10 hours a week or shifting staff for schools already conducting some scratch cooking. Using the average of the Bureau of Labor Statistics series on total compensation for service occupations related to leisure and hospitality and the accommodation and food service workers series, an hourly rate of \$15.43 is used to estimate the wage rate of the additional food service staff to perform the additional scratch cooking.¹¹⁹ This is an additional \$30.85 a school day for scratch cooking or \$5,553 a year for one school. Multiplying this across all schools provides an estimated \$538 million for all schools to increase labor for scratch cooking for 2 additional hours a day. This calculates to \$0.07 more a meal for the increase in labor. This \$0.07 per meal cost is then scaled by prevalence of scratch cooking across recipes and the estimated labor costs are then doubled to account for the proportional increase in food costs. This analysis assumes that about 7.5 billion school meals (5 billion lunches and 2.5 billion breakfasts) are served in SY 2022–2023. It is assumed that about 10 percent of these meals are served in schools that are already cooking 76 percent to 100 percent of their recipes

from scratch and will not have measurable costs associated with moving to the Sodium Final Target in SY 2022–2023. The remaining 90 percent of meals are served in schools that must incur some additional labor and food costs to reduce current sodium levels.

This analysis assumes, based on early implementation progress, most schools are already meeting Sodium Target 1 and can meet Target 1A with reasonable menu changes. In SY 2014–2015, the first year the Sodium Target 1 went into effect, 72 percent of the schools were meeting this requirement for NSLP and 13 percent were within 10 percent of meeting Target 1 for NSLP. For SBP, 67 percent were meeting Target 1 and just over 10 percent were within 10 percent of meeting Target 1. Average prepared sodium levels were already 5 percent to 12 percent lower than the Target 1 limits for NSLP and 6 percent to 9 percent lower for SBP. Average NSLP sodium levels in SY 2014–2015 were also very close to Target 1A.

To capture any schools that are not currently meeting Target 1 or Target 1A, this analysis assumes that 10 percent of meals are served in schools that will need to make changes to their current menus to incorporate lower sodium products. Target 1 was meant to be mostly met with products currently available, but these schools may also need to slightly increase scratch cooking or change

preparation practices. This analysis assumes that these schools will need to allow for one more labor hour a day to facilitate the menu changes needed to achieve Target 1 and Target 1A. This is estimated to cost about \$98 million more in labor and food to bring these schools to Targets 1 and 1A in SY 2022–2023.

Absent this rule, schools would be required to move to the Sodium Final Target. For this analysis it is assumed if schools are cooking more than 75 percent of recipes from scratch, the Sodium Final Target is achievable. This is supported by the assumption that scratch cooking would reduce combination entrées and condiments, which USDA research finds contribute the most sodium to school meals. Based on the prevalence of scratch cooking, it is assumed that about 80 percent meals are served in schools that will need to increase labor by two full hours per day. The remaining 20 percent of meals are served in schools that will need to increase labor by one hour per day, because these schools are already making between 51 percent and 75 percent of recipes from scratch. It is estimated that it would cost about \$975 million in food and labor costs to achieve the Sodium Final Target in SY 2022–2023. This is a per meal increase of \$0.13.

TABLE 9—ESTIMATED COSTS BY SODIUM TARGET
[Millions]

Target	Average hours of additional labor per day	Estimated labor costs	Estimated food costs	Estimated total costs
TARGET 1 IN SY 2022–2023; TARGET 1A IN SY 2023–2024	1.0	\$49	\$49	\$98
FINAL TARGET IN SY 2022–2023	1.8	438.5	438.5	877

This analysis does not take into consideration the costs of purchasing additional equipment and/or kitchen renovations to support scratch cooking or the challenges of immediately moving to the Sodium Final Target without enough time to implement successful strategies to reduce sodium. The school districts in the USDA study on Successful Approaches to Reduce Sodium in School Meals reported that scratch cooking and fresh produce preparation required space for preparing foods, adequate storage space including

freezer and refrigeration space, proper cafeteria line display and service equipment, and maintenance or upgrading of kitchen equipment for efficient mass preparation of items. Smaller SFAs and those with older cafeteria equipment especially noted these challenges. It is unlikely that schools would be able to procure the necessary equipment to support the increases in scratch cooking in time for SY 2022–2023 due to the procurement process timeframe, which has been further delayed by supply chain disruptions. School size and urbanicity were

also associated with SFAs' abilities to procure lower sodium foods and to utilize effective menu planning strategies. Small, rural SFAs reported fewer resources available for purchasing and preparing lower sodium foods, while large, urban SFAs were able to procure more low-sodium items at a lower cost and reported having access to a larger number of suppliers, which enabled them to use more effective menu planning strategies. This is further supported by smaller school districts (less than 500 students enrolled) and rural school districts on average serving

¹¹⁸ This is just for the base analysis. The Uncertainties section provides a sensitivity analysis of other labor hour options. The additional 2 hours is for preparing breakfasts and lunches. It is likely that lunch preparation will account for a larger

share of the 2 hours. The two hours is loosely modeled from the higher average of 51 minutes spent of food preparation from the American Time Use Survey. *American Time Use Survey Home Page* (bls.gov).

¹¹⁹ Full compensation series is less granular than wage series, the two closest series are used to estimate the labor rates for additional food service staff dedicated to cooking.

meals with significantly higher sodium levels in SY 2014–2015.¹²⁰

As noted, sodium reduction must be implemented over time to allow for successful product reformulation while balancing increased scratch cooking. Taste testing was the most used approach for gaining student acceptance of lower sodium items. School districts reported experiencing challenges in gaining student acceptance, but indicated that they were often successful when using a combination of supportive approaches such as performing taste tests to identify student preferences, tailoring menu options to cultural and regional preferences, promoting healthy food choices through education and communication materials, and implementing menu changes incrementally.

Many districts also engaged parents, staff, and community members in taste tests, nutrition education, and other promotional activities to increase buy-in.¹²¹ According to an analysis of 2011–2016 National Health and Nutrition Examination Survey (NHANES) data, almost all school children (94 percent) had usual sodium intakes that exceed the Chronic Disease Risk Reduction (CDRR) level.^{122 123} This is a widespread issue and strategies must be implemented by industry and schools over time for success.

Given that these strategies are meant to be implemented over time, schools will not be able to pivot quickly to these strategies in SY 2022–2023, particularly given the challenges they will face in shifting off of COVID–19 operations. This is also compounded by the current labor shortages school districts and the entire food service industry are facing as employees left jobs during the pandemic.¹²⁴ Prior to the pandemic schools expressed concerns about staffing levels especially in smaller school districts where staff may be responsible for multiple jobs.¹²⁵ The pandemic intensified staffing issues for schools and many are currently experiencing shortages and increases in labor rates. Additional burden is currently placed on schools due to the time needed to manage procurement and menu changes in response to the supply chain disruptions. The

immediacy of moving to the Sodium Final Target in SY 2022–2023 does not allow schools sufficient time to set up the necessary infrastructure to achieve the sodium reduction required for the Sodium Final Target.

Participation Impacts

This final rule is not anticipated to measurably impact school meal participation due to the changes to the milk, whole grains, and sodium requirements. As noted earlier, this rule provides realistic goals for schools still transitioning from COVID–19 operations and encountering supply chain issues. The COVID–19 meal service levels were lower than typical in the early part of the pandemic when most schools shut down and transitioned to grab-and-go sites to ensure continuity of school meals for children. As schools opened and more children attended school in person, meals served started to move closer to pre-pandemic levels.¹²⁶ Through the COVID–19 nationwide waivers, schools have been able to offer free meals to all children to facilitate COVID–19 safety precautions. As schools transition back to typical operations, there may be some uncertainty in participation levels, which may pose challenges in projecting quantities of foods to purchase. This rule is sensitive to the types of foods schools already typically have available to purchase to meet the meal standards. While this rule is not expected to significantly impact program participation, it does support schools and allows additional time for schools to gauge meal program participation post-COVID.

Absent this rule, schools would be required to meet the 2012 standards, most notably meeting the Sodium Final Target requirement, which is a significant reduction in sodium levels. This would pose an extreme challenge for most schools as the full sodium reduction timeline from the 2012 standards was never fully implemented and schools were never required to meet targets below Sodium Target 1. Without this rule, some schools may leave the programs, as the benefits of participation are outweighed by

the resources needed to meet program requirements.

It is unlikely that schools will leave the programs due to the milk and whole grain-rich requirements in the 2012 standards due to improved product availability and current progress. However, moving straight to the Sodium Final Target without gradual reduction in sodium levels through product availability and increased scratch cooking is unrealistic and may result in schools dropping out the programs. As noted earlier, smaller (less than 500 enrolled students) and rural schools had significantly higher sodium levels and face additional challenges due to insufficient resources and lack of product availability. Schools that already receive low levels of federal reimbursement due to less free and reduced-price-certified students may not find the benefits of the programs worth the additional resources needed to abruptly meet the Sodium Final Target. To assess the potential number of schools that would drop out of the school meal programs if the 2012 standards immediately went into effect next school year, smaller schools with low levels of free and reduced-price-certified children (less than 25 percent) are targeted in estimating this unintentional impact.

Just under 5 percent of schools nationwide have less than 500 students enrolled and less than 25 percent free and reduced-price-certified children. This is about 4,500 schools estimated to drop out of the school meal programs absent this rule. About 25 percent of these schools are in rural areas. There are estimated to be about 1.4 million children enrolled in these schools with about 214,000 children approved for free and reduced-price meals.¹²⁷ USDA estimates there are about 814,000 daily NSLP participants and 428,000 daily SBP participants in these schools.¹²⁸ Federal reimbursements are estimated to decrease by an estimated \$180 million the first year (or about 1 percent of total NSLP and SBP meal reimbursements) due to schools dropping out of the NSLP and SBP and children losing access to school meal benefits.

TABLE 10—ANNUAL REDUCTION IN FEDERAL REIMBURSEMENTS DUE TO SCHOOLS LEAVING NSLP AND SBP
[Millions]

FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	5-Year
–\$3	–\$179	–\$184	–\$190	–\$195	–\$751

¹²⁰ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 2: Nutritional Characteristics of School Meals by Elizabeth Gearan, Mary Kay Fox, Katherine Niland, Dallas Dotter, Liana Washburn, Patricia Connor, Lauren Olsho, and Tara Wommak. Project Officer: John Endahl. Alexandria, VA: April 2019.

¹²¹ Gordon, E.L., Morrissey, N., Adams, E., Wiczorek, A. Glenn, M.E., Burke, S. & Connor, P. (2019). Successful Approaches to Reduce Sodium in School Meals Final Report. Prepared by 2M Research under Contract No. AG–3198–P–15–0040. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.

¹²² Reducing sodium intakes above the CDRR is expected to reduce the risk of chronic disease.

¹²³ Unreleased USDA report using 2011–2016 National Health and Nutrition Examination Survey (NHANES) data to examine the relationship between estimated program participation, diet quality, indicators of nutrition and health, food consumption patterns, and nutrient intakes.

¹²⁴ Employment in leisure and hospitality is down by 1.4 million, or 8.2 percent, since February 2020. *The Employment Situation—October 2021* (bls.gov).

¹²⁵ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 1: School Meal Program Operations and

School Nutrition Environments by Sarah Forrestal, Charlotte Cabili, Dallas Dotter, Christopher W. Logan, Patricia Connor, Maria Boyle, Ayseha Enver, and Hiren Nissar. Project Officer: John Endahl. Alexandria, VA: April 2019.

¹²⁶ According to FNS administrative data on meals served across NSLP, SBP, and SFSP, October 2020 meals were only 65 percent of total October 2019 meals. May 2021 meals were 86 percent of May 2019 meals service.

¹²⁷ Based on an internal USDA analysis using nationally representative data from the School Nutrition Meal Cost study on school characteristics.

¹²⁸ Using national participation rates of 57 percent for NSLP and 30 percent for SBP.

While this is a savings for the Federal government in meal reimbursements, it transfers the costs of preparing school meals to the households. Given the time it takes to prepare meals and higher food costs due to inflation and not being able to purchase foods in bulk, it is likely that the costs to the households would be higher than just the Federal reimbursement levels. Lunches consumed from school are, on average, the most nutritious compared to lunches from home or other places, and students consuming school lunch were more likely to consume milk, fruits, vegetables than

students who did not eat a school lunch.¹²⁹ It would take additional time and resources for households to prepare lunches that are equivalent in nutritional value. This could pose hardships for households, especially for those with children approved for free or reduced-price meals.

Summary

As noted earlier, this rule is intended to support the transition from COVID-19 operations and to allow time for a more long-term comprehensive rulemaking process to further update the standards to reflect the

*Dietary Guidelines for Americans, 2020–2025.*¹³⁰ This rule makes adjustments from the proposed rule to continue efforts to improve the nutrition of school meals while maintaining operational feasibility. Most of the impacts associated with this rule are in the form of shifts in purchasing patterns and costs incurred by the schools to procure additional products to meet the standards and increases in labor. Costs in this section may not actually be incurred but reflect the potential value of the changes in this rule and impacts absent this rule.

TABLE 11—ESTIMATED ANNUAL INCREASE AND REDUCTION IN SCHOOL COSTS

[Millions]

ESTIMATED ANNUAL COSTS MOVING TO 2012 STANDARDS	
MILK (NO LOW FAT FLAVORED)	–\$13
100 PERCENT WHOLE GRAIN-RICH	378
SODIUM FINAL TARGET	975
TOTAL	1,341
PER MEAL	0.18
ESTIMATED ANNUAL COSTS OF FINAL RULE	
MILK (LOW FAT FLAVORED ALLOWED)	13
80 PERCENT WHOLE GRAIN-RICH	76
SODIUM TARGET 1 AND 1A	98
TOTAL	187
PER MEAL	0.03
ESTIMATED ANNUAL REDUCTIONS WITH FINAL RULE COMPARED TO 2012 STANDARDS	
MILK (LOW FAT FLAVORED ALLOWED)	13
80 PERCENT WHOLE GRAIN-RICH	– 303
SODIUM TARGET 1 AND 1A	– 780
TOTAL	– 1,069
PER MEAL	– 0.15

If the 2012 standards for milk, whole grain, and sodium are fully implemented in SY 2022–2023, it will cost schools \$0.18 cents per lunch and breakfast in food and labor costs. Impacts to the market will be similar in magnitude as purchasing patterns shift to encompass more whole grain-rich items and ingredients for scratch cooking. The shifts would primarily occur from enriched to whole grain-rich products to the meet the grain requirement and from prepackaged foods with higher sodium levels to other food, such as more fruits and vegetables and ingredients to support more scratch cooking. The milk purchases will shift away from flavored low-fat to flavored fat-free varieties, which will offset total costs since flavored low-fat varieties are slightly more expensive than flavored fat-free varieties. Total annual costs associated with restoring the 2012

standards in SY 2022–2023 are estimated at \$1.3 billion the first year to make this transition based on progress to-date in implementing the 2012 standards. If progress regressed from SY 2014–2015 due to uncertainty in the requirements over the years and COVID-19 impacts, costs are estimated to be closer to \$1.7 billion the first year or \$0.24 more per breakfast and lunch.

Estimated annual costs associated with moving to the requirements in this rule are \$187 million the first year or \$0.03 more per lunch and breakfast. These costs are associated with purchasing flavored low-fat milk and more whole grain-rich products. There are also some costs associated with schools that still need to move to Target 1 for NSLP and SBP and Target 1A for NSLP in SY 2023–2024 through purchasing shifts to lower sodium products and increases in

scratch cooking. If all flavored fat-free milk is substituted with flavored low-fat milk, and schools regressed in whole grain-rich progress compared to SY 2014–2015, this rule is estimated to cost \$665 million the first year or \$0.09 more per meal.

This rule is estimated to reduce impacts to schools by \$0.15 per meal or \$1.1 billion in the first year by reducing the requirement from serving exclusively whole grain-rich products to 80 percent whole grain-rich products and holding Sodium Target 1 for SY 2022–2023 for NSLP and SBP and moving to Target 1A for NSLP in SY 2023–2024. There is an increase in costs due to allowing flavored low-fat milk, which tends to cost slightly more than flavored fat-free milk.¹³¹

This rule provides achievable standards while USDA engages in more comprehensive long-term rulemaking to further update the

¹²⁹ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 4: Student Participation, Satisfaction, Plate Waste, and Dietary Intakes by Mary Kay Fox, Elizabeth Gearan, Charlotte Cabili, Dallas Dotter,

Katherine Niland, Liana Washburn, Nora Paxton, Lauren Olsho, Lindsay LeClair, and Vinh Tran. Project Officer: John Endahl. Alexandria, VA: April 2019.

¹³⁰ The new final rule is anticipated to be in effect in time for SY 2024–2025.

¹³¹ Voluntary incurring of a cost is likely associated with benefits that are difficult to quantify—potentially, in this case, including reduced food waste.

meal standards. These costs assume relatively stable participation over the 5-

years with SY 2022–2023 projected to return to pre-pandemic meal service levels.

TABLE 12—ESTIMATED 5-YEAR COSTS AND REDUCTION
[Millions]

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	5-Year
ESTIMATED COSTS MOVING TO 2012 STANDARDS						
MILK (NO FLAVORED LOW-FAT)	–\$2	–\$13	–\$13	–\$14	–\$14	–\$56
100 PERCENT WHOLE GRAIN-RICH	61	378	386	394	402	1,620
SODIUM FINAL TARGET	156	975	995	1,015	1,035	4,176
TOTAL	\$214	\$1,341	\$1,367	\$1,395	\$1,423	\$5,740
ESTIMATED COSTS OF FINAL RULE						
MILK (FLAVORED LOW-FAT AL-LOWED)	2	13	13	14	14	56
80 PERCENT WHOLE GRAIN-RICH	12	76	77	79	80	324
SODIUM TARGET 1 AND 1A	16	98	100	102	104	421
TOTAL	30	187	191	195	199	802
ESTIMATED REDUCTION IN COSTS DUE TO FINAL RULE						
MILK (FLAVORED LOW-FAT AL-LOWED)	2	13	13	14	14	56
80 PERCENT WHOLE GRAIN-RICH	–48	–303	–309	–315	–321	–1,296
SODIUM TARGET 1 AND 1A	–125	–780	–795	–811	–827	–3,338
TOTAL	–171	–1,069	–1,090	–1,112	–1,134	–4,577

The number of schools dropping out of the programs will reduce the number of meals served if 2012 standards are restored. This

will reduce the costs associated with returning to the 2012 standards by 3 percent or an annual reduction of \$40 million due to

schools dropping out of the school meal programs and less children participating.

TABLE 13—INTERACTION BETWEEN 2012 STANDARDS COST AND SCHOOLS LEAVING NSLP AND SBP
[Millions]

FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	5-Year
\$208	\$1,300	\$1,326	\$1,354	\$1,382	\$5,362

Uncertainties

School Meal Student Participation

As noted earlier, participation for the base estimates is assumed to mirror pre-pandemic levels and then stabilize at a rate of about a 2 percent increase from year to year. Long-term participation impacts of the pandemic are unknown, and a full rebound may not occur. There is also the chance participation

will increase as most schools have been offering meals at no charge to students. Households may have realized the benefits of school meals during the pandemic, which may cause children to participate at higher rates even as schools return to standard operations. This sensitivity analysis assumes a participation increase and decrease of 5 percent to measure the impact of participation changes on the estimated

impacts of this rule and returning to the 2012 standards absent this rule. This analysis does not take into consideration potential economies of scale: As more meals are served, schools may be able to reduce costs through bulk purchasing and preparing meals at a lower per meal cost. These costs are compared to the base analysis costs for the first year of \$1.3 billion to return to the 2012 standards and \$187 million for this final rule.

TABLE 14—PROJECTED COSTS BY PARTICIPATION CHANGE
[Millions]

	1-Year	5-Year
ESTIMATED COSTS MOVING TO 2012 STANDARDS		
5 PERCENT PARTICIPATION INCREASE	\$1,408	\$6,292
5 PERCENT PARTICIPATION DECREASE	1,274	4,928
ESTIMATED COSTS OF FINAL RULE		
5 PERCENT PARTICIPATION INCREASE	197	879
5 PERCENT PARTICIPATION DECREASE	178	689

Grain Cost Difference

The base analysis assumed that there is currently about a 15 percent price increase for whole grain-rich items compared to enriched grain items. This assumption was based on decreasing the 34 percent assumed mark up in whole grain-rich prices in the Regulatory Impact Analysis for the 2012 rule. Most of the grain items offered in school

meals in SY 2014–2015 were whole grain-rich, as USDA Foods and the broader school food industry have increased whole grain offerings over the years. This reduction was assumed to be about half the 34 percent; however, this was adjusted based on data supporting a reduction in the 34 percent but unable to be quantified. The impacts estimated below are based on a 30 percent

and 5 percent price increase for whole grain-rich products compared to enriched grain products. This gives a sense of the potential range of costs associated with the whole grain-rich requirements in this rule, and in the 2012 rule. These estimates are compared to the base analysis estimates of \$379 million to go to the 2012 standards and \$76 million for this rule.

TABLE 15—ESTIMATED COSTS OF INCREASING WHOLE GRAIN-RICH ITEMS BY WHOLE GRAIN-RICH COST INCREASE LEVEL
[Millions]

Requirement change	Expected annual cost (increasing from 75 percent WGR)	High annual cost (increasing from 50 percent WGR)
ASSUMING A 30 PERCENT COST INCREASE FOR WHOLE GRAIN-RICH ITEMS		
INCREASING TO 100 PERCENT	\$757	\$1,513
INCREASING TO 80 PERCENT	\$151	908
ASSUMING A 5 PERCENT COST INCREASE FOR WHOLE GRAIN-RICH ITEMS		
INCREASING TO 100 PERCENT	126	252
INCREASING TO 80 PERCENT	25	151

Labor Hours for Scratch Cooking

As noted, until lower sodium products are more readily available in the school food market, USDA expect that schools would rely on more labor-intensive food preparation, including scratch cooking, to meet lower sodium standards. The assumption that it would take about 2 hours a day to increase

scratch cooking to support sodium reduction was based on a general concept that about an hour is spent on food preparation and clean up a day.¹³² For the sake of the base analysis, this time is doubled to two hours to reflect the average increased time for bulk scratch cooking across schools. This may be an underestimate especially absent this rule and requiring schools to quickly pivot to scratch

cooking possibly for the first time. It may take longer to plan recipes and successfully prepare meals as well as obtain the necessary equipment, resources, and staff to support additional scratch cooking. This analysis increases the labor hours to 20 hours per week or 4 hours per day to estimate the increased costs for additional hours dedicated to scratch cooking.

TABLE 16—ESTIMATED INCREASE IN SODIUM COSTS FOR 4 HOURS/DAY

Target	Estimated labor costs	Estimated food costs	Estimated total costs
TARGET 1 IN SY 2022–2023; TARGET 1A IN SY 2023–2024	\$97	\$97	\$194
FINAL TARGET IN SY 2022–2023	877	877	1,754

D. Benefits

This final rule aligns with progress implementing the 2012 meal standards and provides schools the ability to transition from COVID–19 operations. It is not expected schools will need to make significant modifications to their typical operations and resources to meet the requirements in this final rule. This rule is to support schools recovering from significant supply chain disruptions, which have made it difficult to obtain food needed to meet certain meal pattern requirements and provide the necessary time for USDA to make long term changes to continue to improve the nutritional content of school meals.

School meals are an important source of food for almost 30 million children each school day and have served as critical nutrition support during the COVID–19 pandemic. During the COVID–19 pandemic,

about 1 in 10 adults (25 million) reported that they or their families have sometimes or often not had enough food to eat in the last 7 days. Food hardship rates were higher for Black and Hispanic adults, with 1 and 5 Black adults, and 1 in 6 Hispanic adults, reporting that they or their families have sometimes or often not had enough to eat in the last 7 days. Families with children were also more likely to experience hardship, with 49 percent more frequent reports of food insufficiency compared to those without children. Schools served an important source of food assistance during the pandemic. Families reporting receiving free meals or groceries during the last 7 days reported schools as the most common source of this assistance.¹³³

The nutrition content of school meals has already significantly increased and is leading to long term dietary improvements among

school children. As noted earlier, total HEI–2010 scores for lunches consumed were higher for NSLP participants, regardless of income, compared to nonparticipants, and NSLP participants' lunches had higher scores for of dairy, whole grains, and vegetables and lower concentrations of refined grains and empty calories.¹³⁴ Another study that evaluated diet quality trends by food source among U.S. children and adults and by different sociodemographic subgroups found that the quality of foods (meals, snacks, and beverages) consumed from school improved significantly without population disparities. These findings suggest that the 2012 meal standards produced significant, specific, and equitable changes in dietary quality of school foods. The increase in dietary quality of foods consumed from school was primarily driven by significant improvement in scores

¹³² Table A–1. Time spent in detailed primary activities and percent of the civilian population engaging in each activity, averages per day by sex, 2019 annual averages (bls.gov).

¹³³ USDA internal analysis of the Census Household Pulse data: Household Pulse Survey Data Tables (census.gov).

¹³⁴ Gearan EC, Monzella K, Jennings L, Fox MK. Differences in Diet Quality between School Lunch

Participants and Nonparticipants in the United States by Income and Race. Nutrients. 2021;12(12):3891. <https://www.mdpi.com/2072-6643/12/12/3891>.

for whole grains, saturated fat, and sodium.¹³⁵

This final rule maintains and advances these nutritional improvements while USDA works to further strengthen the school meal pattern requirements through a permanent rulemaking based on a comprehensive review of the *Dietary Guidelines for Americans, 2020–2025*. Taking time to incorporate the latest science is imperative. The *Dietary Guidelines* note that taste preference for salty foods may be established early in life, and that early food preference can influence later food choices. In adults, there is moderate to strong evidence for a causal and intake-response relationship between sodium intake and cardiovascular risk factors, including hypertension.¹³⁶ Reducing daily sodium intake down to the CDRR reduces these risks and would particularly benefit groups with higher prevalence and risk for hypertension and cardiovascular disease, including older adults and certain racial and ethnic groups, particularly non-Hispanic Black groups. In SY 2014–2015 about 73 percent of Non-Hispanic Black children usually participated in NSLP and about 46 percent participated in SBP. On average, elementary school participation was higher than middle and high school participation in both the NSLP and SBP.¹³⁷ stressing the importance of building on the success of school meals in supporting healthy eating.

Returning to the 2012 standards in SY 2022–2023 would be unrealistic for schools, with an estimated \$1.3 billion in food and labor costs to support more scratch cooking and food purchases shifts but also from an

operational standpoint. Standing up increased scratch cooking takes time to execute successfully, including time for students to provide feedback through taste tests and other activities to increase acceptance. Manufacturers need time to test and reformulate whole grain-rich and lower sodium products for the school market for schools to employ a comprehensive sodium reduction plan.

The COVID–19 nationwide waivers significantly changed program operations, and time is needed to transition back to typical meal service. The timing of this rule is important as it provides time for schools to transition, but also leverages the important lessons from the pandemic on the importance of strong nutrition standards. The COVID–19 pandemic and corresponding school closures greatly disrupted the lives of children, likely resulting in increased stress, irregular mealtimes, less access to nutritious foods, increased screen time, and fewer opportunities for physical activity. Families already disproportionately affected by obesity risk factors likely had additional interruptions in income, food, and other social factors that impact obesity risk and health.¹³⁸ ¹³⁹ This rule is estimated to potentially require \$187 million in additional resources or changes in purchasing patterns to implement; however, it saves an estimated \$0.15 per meal if schools were required to fully meet all 2012 standards in SY 2022–2023. Schools would face extreme challenge immediately returning to the 2012 standards from COVID–19 operations which would be compounded by the supply chain

disruptions. This rule strikes the necessary balance in operational feasibility and recognizing the critical need to maintain strong achievable school nutrition standards during this transition period to continue to improve the diets of school children.

E. Alternatives

Whole Grain-Rich Requirement at 60 Percent

One consideration when developing this rule was to set a requirement that schools must offer at least 60 percent of grain offerings as whole grain-rich instead of 80 percent. As noted earlier, in SY 2014–2015, schools were on average serving about 70 percent of grains as whole grain-rich. While the 60 percent threshold would likely be easier to meet, it could be a step back in whole grain-rich progress. If all schools regressed back to the requirement that only half of grain offerings had to be whole grain-rich, the 60 percent would have slightly increased progress. USDA has no evidence to suggest that schools regressed in whole grain-rich offerings before the pandemic and recognizes the important role whole grains play in a nutritious diet. Using the same methodology as the base whole grain-rich analysis, it would cost about \$151 million for schools to move to 60 percent of grain offerings as whole grain-rich. This estimate assumes that all schools moved back to the requirement of just half of grains offering as whole grain-rich. This is equivalent to the \$454 million for all schools to move from half of grain offerings as whole grain-rich to 80 percent whole grain-rich offerings.

TABLE 17—ESTIMATED COSTS OF INCREASING WHOLE GRAIN-RICH ITEMS
(Millions)

Threshold	Expected annual cost (increasing from 75 percent WGR)	High annual cost (increasing from 50 percent WGR)
INCREASING TO 100 PERCENT	\$378	\$757
INCREASING TO 80 PERCENT	76	454
INCREASING TO 60 PERCENT	0	151

Sodium Target 1 for SY 2022–2023 and Sodium Target 2 for SY 2023–2024

Another consideration during the decision process for this rule was to require schools to meet Sodium Target 1 in SY 2022–2023 and move to Sodium Target 2 in SY 2023–2024. As noted earlier, the sodium timeline from the 2012 standards was never fully implemented and schools have only been required to reach Sodium Target 1. Sodium Target 2 for SBP is about a 10 percent reduction from Sodium Target 1 and a 24

percent reduction for NSLP. Average sodium levels for prepared SBP breakfasts in SY 2014–2015 were about 2 percent to 5 percent higher than Sodium Target 2, and average sodium levels for NSLP lunches were about 14 percent to 20 percent higher than Sodium Target 2. This would still be a substantial reduction for schools to achieve in one school year. Originally, Sodium Target 2 was meant to go into effect 3 years after schools were required to meet Sodium Target 1. These difficulties would be compounded by

prolonged uncertainty regarding the Sodium Targets, industry needing more time to reformulate products with lower sodium levels, and the challenges schools may face transitioning from COVID–19 operations and supply chain disruptions. Using the same methodology as the base sodium estimates, it is estimated that schools would require at least 1 hour a day of additional scratch cooking to meet Sodium Target 2 as well as the equivalent amount to support changes in purchasing patterns. It is estimated to cost

¹³⁵ Liu J, Micha R, Li Y, Mozaffarian D. Trends in Food Sources and Diet Quality Among US Children and Adults, 2003–2018. *JAMA Netw Open*. 2021;4(4):e215262. doi:10.1001/jamanetworkopen.2021.5262.

¹³⁶ National Academies of Sciences, Engineering, and Medicine 2019. *Dietary Reference Intakes for Sodium and Potassium*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25353>.

¹³⁷ U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support, School Nutrition and Meal Cost Study, Final Report Volume 4: Student Participation, Satisfaction, Plate Waste, and Dietary Intakes by Mary Kay Fox, Elizabeth Gearan, Charlotte Cabili, Dallas Dotter, Katherine Niland, Liana Washburn, Nora Paxton, Lauren Olsho, Lindsay LeClair, and Vinh Tran. Project Officer: John Endahl. Alexandria, VA: April 2019. Available online at: www.fns.usda.gov/research-and-analysis.

¹³⁸ Andrew G. Rundle1,2, Yoosun Park3, Julie B. Herbstman4, Eliza W. Kinsey1, and Y. Claire Wang. COVID–19–Related School Closings and Risk of Weight Gain Among Children.

¹³⁹ Lange SJ, Kompaniyets L, Freedman DS, et al. Longitudinal Trends in Body Mass Index Before and During the COVID–19 Pandemic Among Persons Aged 2–19 Years—United States, 2018–2020. *MMWR Morb Mortal Wkly Rep* 2021;70:1278–1283. DOI: <http://dx.doi.org/10.15585/mmwr.mm7037a3>.

about \$244 million in labor and the same amount in food costs for a total of \$488 million for schools to reach Sodium Target 2. Along with the costs to reach Target 2, it

would cost an additional \$98 million for 10 percent of schools to comply with Target 1. This is an annual total of \$585 million for food and labor costs for schools to meet

Sodium Target 2. The base analysis estimate for this rule only included the \$98 million for the 10 percent of meals to reach Target 1 and Target 1A.

TABLE 18—ESTIMATED COSTS BY SODIUM TARGET
[Millions]

Target	Average hours of additional labor per day	Estimated labor costs	Estimated food costs	Estimated total costs
TARGET 1 IN SY 2022–2023; TARGET 1A IN SY 2023–2024	1.0	\$49	\$49	\$98
FINAL TARGET IN SY 2022–2023	1.8	438.5	438.5	877
TARGET 2 IN SY 2023–2024	1.0	244	244	488

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